



***Enduring Resources***

475 17<sup>th</sup> Street Suite 1500 Denver Colorado 80202  
Telephone 303 573-1222 Fax 303 573 0461

October 25, 2006

Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
P. O. Box 145801  
Salt Lake City, Utah 84114-5801

Attn.: Ms. Diana Whitney

RE: Enduring Resources, LLC  
Asphalt Wash 11-24-41-16  
NE-NE 16-11S-24E, BHL  
NW-NE, 16-11S-24E, Surface  
State Lease: ML-47080  
Uintah County, Utah

Dear Ms. Whitney:

Enclosed are two original applications to drill concerning the above-referenced proposed well. This information was also submitted to SITLA.

Enduring Resources, LLC is requesting the Utah Division of Oil, Gas and Mining to hold this application and all future information as confidential.

If any questions arise or additional information is required, please contact me at 303-350-5719

Very truly yours,

**ENDURING RESOURCES, LLC**  
Evette Bissett  
Regulatory Compliance Assistant

Enclosures

cc: SITLA w/ attachments

**RECEIVED**

**OCT 27 2006**

**DIV. OF OIL, GAS & MINING**

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐  
(highlight changes)

<b>APPLICATION FOR PERMIT TO DRILL</b>				5. MINERAL LEASE NO: <b>ML-47080</b>	6. SURFACE: State
1A. TYPE OF WORK:    DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>				7. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
B. TYPE OF WELL:    OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____    SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>				8. UNIT or CA AGREEMENT NAME:	
2. NAME OF OPERATOR: <b>Enduring Resources, LLC</b>				9. WELL NAME and NUMBER: <b>Asphalt Wash 11-24-41-16</b>	
3. ADDRESS OF OPERATOR: <b>475 17th St., Ste 1500    CITY Denver    STATE CO    ZIP 80220</b>				10. FIELD AND POOL, OR WILDCAT: <b>Undesignated</b>	
4. LOCATION OF WELL (FOOTAGES) <b>651078X 441424Y 39.866868 - 109.233620</b> AT SURFACE: <b>836' FNL - 2160' FEL</b> AT PROPOSED PRODUCING ZONE: <b>654' FNL - 661' FEL NENE</b> <b>651533X 4414329Y 39.867370 - 109.228290</b>				11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>NWNE 16 11S 24E</b>	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: <b>59.1 Southeast of Vernal, UT</b>				12. COUNTY: <b>Uintah</b>	13. STATE: <b>UTAH</b>
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) <b>654'</b>		16. NUMBER OF ACRES IN LEASE: <b>320</b>		17. NUMBER OF ACRES ASSIGNED TO THIS WELL: <b>40 acres</b>	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) <b>1000' +</b>		19. PROPOSED DEPTH: <b>6,491</b>		20. BOND DESCRIPTION: <b>RLB0008031</b>	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): <b>5499'    RT-KB</b>		22. APPROXIMATE DATE WORK WILL START: <b>1/20/2007</b>		23. ESTIMATED DURATION: <b>20 days</b>	

24. PROPOSED CASING AND CEMENTING PROGRAM							
SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT			SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT		
20"	14" line pipe			40	3 yards Ready Mix		
11"	8-5/8"	J-55	24#	2,016	Premium Lead	138 sxs	3.50 11.1
					Premium Tail	138 sxs	1.15 15.8
7-7/8"	4-1/2"	N-80	11.6#	6,491	Class G	30 sxs	3.3 11.0
					50/50 Poz Class G	813 sxs	1.56 14.3

25. ATTACHMENTS	
VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:	
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER  <input checked="" type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN  <input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) <u><b>Evette Bissett</b></u>	TITLE <u><b>Regulatory Compliance Assistant</b></u>
SIGNATURE <u><i>Evette Bissett</i></u>	DATE <u><b>10/24/2006</b></u>

(This space for State use only)

API NUMBER ASSIGNED: **43-047-38768**

**Approved by the  
Utah Division of  
Oil, Gas and Mining**

APPROVAL:

Date: **05-14-07**

(See Instructions on Reverse Side)

By: *[Signature]*

**RECEIVED**

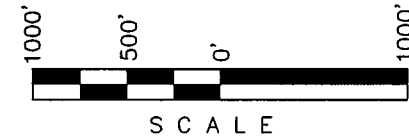
**OCT 27 2006**

DIV. OF OIL, GAS & MINING

**T11S, R24E, S.L.B.&M.**

## ENDURING RESOURCES

WELL LOCATION, ASPHALT WASH  
11-24-41-16, LOCATED AS SHOWN IN  
THE NE 1/4 NE 1/4 OF SECTION 16,  
T11S, R24E, S.L.B.&M. UTAH COUNTY,  
UTAH.



### NOTES:

1. Well footages are measured at right angles to the Section Lines.
2. The Bottom of hole bears N83°12'33"E 1508.90' from the Surface Position.
3. Bearings are based on Global Positioning Satellite observations.
4. BASIS OF ELEVATION IS BENCH MARK 89 EAM 1965 LOCATED IN THE WEST 1/2 OF SECTION 5, T12S, R24E, S.L.B.&M. THE ELEVATION OF THIS BENCH MARK IS SHOWN ON THE ARCHY BENCH SE 7.5 MIN. QUADRANGLE AS BEING 6075'.

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS  
PREPARED FROM FIELD NOTES OF A LOCAL SURVEY  
MADE BY ME OR UNDER MY SUPERVISION AND THAT  
THE SAME ARE TRUE AND CORRECT TO THE BEST OF  
MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR  
REGISTRATION No. 362251  
STATE OF UTAH

## TIMBERLINE LAND SURVEYING, INC.

38 WEST 100 NORTH. - VERNAL, UTAH 84078  
(435) 789-1365

DATE SURVEYED: 10-06-06	SURVEYED BY: B.J.S.	SHEET <b>2</b> OF 9
DATE DRAWN: 10-12-06	DRAWN BY: M.W.W.	
SCALE: 1" = 1000'	Date Last Revised:	

S89°59'W - 80.06 (G.L.O.)  
N89°52'09"W - 5286.90' (Meas.)

Found Set  
marked stone,  
Pile of Stones

1/4 Corner not  
found

Found Set  
marked stone,  
Pile of Stones

Well Surface  
Position

Bottom  
of Hole

N00°07'23"W (Basis of Bearings)  
2609.23' (Measured)

**16**

**WELL LOCATION:  
ASPHALT WASH 11-24-41-16**

ELEV. UNGRADED GROUND = 5482.6'

Found Set  
Marked Stone.  
Pile of Stones.

Found Set  
marked stone.

Found Set  
marked stone,  
pile of stones.

N89°58'W - 80.04 (G.L.O.)

▲ = SECTION CORNERS LOCATED

**ASPHALT WASH 11-24-41-16**  
**(Bottom Hole) NAD 83 Autonomous**  
LATITUDE = 39° 52' 02.79"  
LONGITUDE = 109° 13' 43.85"

**ASPHALT WASH 11-24-41-16**  
**(Surface Position) NAD 83 Autonomous**  
LATITUDE = 39° 52' 01.04"  
LONGITUDE = 109° 14' 03.06"

**ENDURING RESOURCES, LLC**

425 Seventeenth Street, Suite 1500

Denver, Colorado 80202

Telephone: 303-573-1222

Facsimile: 303-573-0461

October 25, 2006

State of Utah  
Division of Oil, Gas and Mining  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

Attention: Ms. Diana Whitney

**RE: Exception Well Location  
Asphalt Wash 11-24-41-16  
NENE 16-T11S-R24E BHL  
NWNE 16-T11S-R24E Surface  
836' FNL - 2160' FEL  
654' FNL - 661' FEL Surface  
Lease Serial No.: ML-47080  
Uintah County, Utah**

Dear Ms. Whitney:

Enduring Resources, LLC ("ERLLC") plans to drill the above-referenced well directionally from an exception location to limit surface impact and drilling on steep slopes.

This well will be drilled from the existing well pad of the Rainbow 11-24-31-16.

ERLLC is the only leasehold interest owner within 460 feet of any part of the above-referenced proposed well's proposed well bore, therefore,

*A. ERLLC also grants itself permission for an exception well location.*

In the event there are any other outstanding matters preventing these APD's from being approved, please let me know at your earliest convenience, 303-350-5719 ([ebissett@enduringresources.com](mailto:ebissett@enduringresources.com)).

Very truly yours



**ENDURING RESOURCES, LLC**  
Evette Bissett  
Regulatory Compliance Assistant

**RECEIVED**

**OCT 27 2006**

**DIV. OF OIL, GAS & MINING**

**Enduring Resources, LLC  
Asphalt Wash 11-24-41-16  
NE-NE 16-T11S-R24E BHL  
NW-NE 16-11S-24E Surface  
Uintah County, Utah  
State Lease: ML-47080**

**ONSHORE ORDER 1 - DRILLING PLAN**

**1. Estimated Tops of Geological Markers:**

Formation	Depth (K.B.)
Uinta	Surface
Green River	108
Wasatch	2438
Mesaverde	4049

**2. Estimated Depths of Anticipated Water, Oil, Gas or Other Minerals:**

Substance	Formation	Depth (K.B.)
	KB-Uinta Elevation: 5499'	
Oil / Gas	Green River	108
Oil /Gas	Wasatch	2438
Oil /Gas	Mesaverde	4049
	Estimated TD	6160
	Estimated MD	6491

An 11" hole will be drilled to approximately 2000 feet. The depth will be determined by the depth that the Birds Nest zone is encountered. The hole will be drilled 400 feet beyond the top of the Birds Nest zone and surface casing will be set.

**3. Pressure Control Equipment: (3000 psi schematic attached)**

- A. Type: Eleven (11) inch double gate hydraulic BOP with eleven (11) inch annular preventer on 3,000 psi casinghead, with 3,000 psi choke manifold equipped per the attached diagram. BOPE as specified in *Onshore Oil & Gas Order Number 2*. A PVT, stroke counter and flow sensor will be installed to check for flow and monitor pit volume.
- B. Pressure Rating: 3,000 psi BOPE
- C. Kelly will be equipped with upper and lower Kelly valves.
- D. Testing Procedure: Annular Preventer

At a minimum, the annular preventer will be pressure tested to 50% of the stack rated working pressure for a period of ten (10) minutes or until provisions of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

1. When the annular preventer is initially installed;
2. Whenever any seal subject to test pressure is broken;
3. Following related repairs; and
4. At thirty (30) day intervals.

In addition to the above, the annular preventer will be functionally operated at least weekly.

#### Blow-Out Preventer

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the BOP stack (if isolated from the surface casing by a test plug) or to 70% of the internal yield strength of the surface casing (if the BOP is not isolated from the casing by a test plug). Pressure will be maintained for a period of at least ten (10) minutes or until the requirements of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

1. When the BOP is initially installed;
2. Whenever any seal subject to test pressure is broken;
3. Following related repairs; and
4. At thirty (30) day intervals.

In addition to the above, the pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills and tests will be recorded in the IADC driller's log.

#### E. Miscellaneous Information:

The blowout preventer and related pressure control equipment will be installed, tested and maintained in compliance with the specifications in and requirements of *Onshore Oil & Gas Order Number 2*.

#### 4. Proposed Casing & Cementing Program:

##### A. Casing Program: All New

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Depth Set (MD)
20"	14" O.D.				40' (GL)
11"	8-5/8"	24#	J-55	ST&C	0 – 2,016' (KB) est.
7-7/8"	4-1/2"	11.6#	N-80	LT&C	0 – 6491' (KB)

The surface casing will have guide shoe. Centralize the shoe joint with bowspring centralizers in the middle and top of the joint and the next 16 joints with bowspring centralizers on every other collar (8 centralizers total). Thread lock guide shoe.

Casing string(s) will be pressure tested to 0.22 psi/foot of casing string length or 1500 psi, whichever is greater (not to exceed 70% of the internal yield strength of the casing), after cementing and prior to drilling out from under the casing shoe.

#### B. Casing Design Parameters:

Depth (MD)	Casing	Collapse(psi)/SF	Burst (psi)/SF	Tension(mlbs)/SF
40' (GL)	14" OD			
2016' (KB)	8-5/8", 24#/ft, J55, STC	1370/1.52(a)	2950/3.28(b)	244/5.81(c)
6491' (KB)	4-1/2", 11.6#/ft, N-80, LTC	6350/1.88 (d)	7780/2.51 (e)	223/3.45(f)

- (a.) based on full evacuation of pipe with 8.6 ppg fluid on annulus
- (b.) based on 8.6 ppg gradient with no fluid on annulus
- (c.) based on casing string weight in 8.6 ppg mud
- (d.) based on full evacuation of pipe with 10.0 ppg fluid on annulus
- (e.) based on 9.2 ppg gradient, gas to surface, with no fluid on annulus, no gas gradient
- (f.) based on casing string weight in 9.2 ppg mud

#### PROPOSED CEMENTING PROGRAM

##### Surface Casing (if well will circulate)-Cemented to surface

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
8-5/8"	Lead	1516	Premium cement + 16% gel + 0.25 pps celloflake	138	25%	11.1	3.50
8-5/8"	Tail	500	Premium cement + 2% CaCl <sub>2</sub> + 0.25 pps celloflake	138	25%	15.8	1.15

A cement top job is required if cement fallback is greater than 10' below ground level. Top job (weight 15.8 ppg, yield 1.15 ft<sup>3</sup>/sx) cement will be premium cement w/ 3% CaCl<sub>2</sub>.+0.25 pps celloflake. Volume as required

##### Surface Casing (if well will not circulate) - Cemented to surface

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
8-5/8"	Lead	500	Premium cement + 2% CaCl <sub>2</sub> + 0.25 pps celloflake	138	25	15.8	1.15
8-5/8"	Top job	As req.	Premium cement + 3% CaCl <sub>2</sub> + 0.25 pps celloflake	As Req.		15.8	1.15

**Production Casing and Liner** - Cemented TD to 300' above base of surface casing

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
4-1/2"	Lead	322	Class "G" + 5% NaCl + 12% Gel + 0.25 pps celloflake + 0.2% antifoam + 0.25% fluid loss + 1% extender	30	25	11.0	3.3
4-1/2"	Tail	4453	50/50 POZ Class G + 2% gel + 1% CaCl <sub>2</sub> + 0.2% dispersant + 0.2% fluid loss + 0.1% antifoam	813	25	14.3	1.56

Cement volumes for the 4-1/2" Production Casing will be calculated to provide a top of cement to 300' above base of surface casing. Cement volumes are approximate and were calculated under the assumption that a gauge hole will be achieved. Actual cement volumes may vary due to variations in the actual hole size and will be determined by running a caliper log on the drilled hole. Actual cement types may vary due to hole conditions and cement contractor used.

All waiting on cement (WOC) times will be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

5. **Drilling Fluids (mud) Program:**

Interval (MD)	Mud Weight	Fluid Loss	Viscosity	Mud Type
0' – 2016' (KB)		No cntrl		Air/mist
2000'-3000' (KB)	8.4-8.6	No cntrl	28-36	Water
3000'-6491' (KB)	8.8-9.8	8 - 10 ml	32-42	Water/Gel

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blowout will be available at the well site during drilling operations.

6. **Evaluation Program:**

Tests: No tests are currently planned.

Coring: No cores are currently planned.

Samples: No sampling is currently planned.



## Logging

- Dual Induction – SFL /Gamma Ray/Caliper/SP/TDLT/CNL/ML  
TD to Base Surface Casing
- Cement Bond Log / Gamma Ray:  
TD to Base of Surface Casing or Top of Cement if below Base of Surface Casing

Stimulation: A stimulation or frac treatment will be designed for completion of this well based on openhole log analysis. The drill site, as approved, will be sufficient size to accommodate all completion activities.

## 7. Abnormal Conditions:

No abnormal temperatures or pressures are anticipated. No H<sub>2</sub>S has been encountered or known to exist from previous wells drilled to similar depths in the general area.

Maximum anticipated bottom hole pressure equals approximately 3375 psi (calculated at 0.52psi/foot of hole) and maximum anticipated surface pressure equals approximately 1947 psi (anticipated bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot of hole).

## 8. Anticipated Starting Dates:

- Anticipated Commencement Date- Within one year of APD issue.
- Drilling Days- Approximately 10 days
- Completion Days - Approximately 10 days
- Anticipate location construction within 30 days of permit issue.

## 9. Variances:

None anticipated

## 10. Other:

A Cultural Resource Inventory and Paleontology reconnaissance shall be conducted for the well location, access route and pipeline. The reports shall be submitted to the Division of Oil, Gas and Mining and the School and Institutional Trust lands Administration upon their receipt.

Single Shot directional surveys will be dropped every 2000 feet to monitor hole angle.

**ENDURING RESOURCES**  
**Asphalt Wash 11-24-41-16**  
**Section 16, T11S, R24E, S.L.B.&M.**

FROM THE INTERSECTION OF U.S. HIGHWAY 40 AND 500 EAST STREET IN VERNAL, UTAH PROCEED IN AN EASTERLY THEN SOUTHERLY DIRECTION ALONG U.S. HIGHWAY 40 APPROXIMATELY 3.3 MILES TO THE JUNCTION OF STATE HIGHWAY 45; EXIT RIGHT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 45 APPROXIMATELY 40.5 MILES TO THE JUNCTION OF THE DRAGON ROAD (COUNTY B ROAD 4180). THIS ROAD IS LOCATED APPROXIMATELY 4.5 MILES SOUTH OF BONANZA, UTAH. EXIT LEFT AND PROCEED IN A SOUTHEASTERLY DIRECTION ALONG COUNTY B ROAD 4180 APPROXIMATELY 4.0 MILES TO THE JUNCTION OF THE KINGS WELLS ROAD (COUNTY B ROAD 4190). EXIT RIGHT AND PROCEED IN A SOUTHWESTERLY DIRECTION ALONG COUNTY B ROAD 4190 APPROXIMATELY 8.1 MILES TO THE INTERSECTION OF THE EAST FORK ASPHALT WASH ROAD (COUNTY B ROAD 4250); EXIT RIGHT AND PROCEED IN A NORTHEASTERLY DIRECTION ALONG COUNTY B ROAD 4250 APPROXIMATELY 3.2 MILES TO THE INTERSECTION OF A SERVICE ROAD; EXIT RIGHT AND FOLLOW SERVICE ROAD IN A NORTHERLY DIRECTION APPROXIMATELY 255 FEET TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 59.1 MILES IN A SOUTHEASTERLY DIRECTION.

## **Enduring Resources, LLC**

**Asphalt Wash 11-24-41-16**  
NE-NE 16-11S-24E BHL  
NW-NE 16-11S-24E Surface  
Uintah County, Utah  
State Lease: ML-47080

### **MULTI-POINT SURFACE USE & OPERATIONS PLAN**

#### **1. Existing Roads:**

From The Intersection Of U.S. Highway 40 And 500 East Street In Vernal, Utah Proceed In An Easterly Then Southerly Direction Along U.S. Highway 40 Approximately 3.3 Miles To The Junction Of State Highway 45; Exit Right And Proceed In A Southerly Direction Along State Highway 45 Approximately 40.5 Miles To The Junction Of The Dragon Road (County B Road 4180). This Road Is Located Approximately 4.5 Miles South Of Bonanza, Utah. Exit Left And Proceed In A Southeasterly Direction Along County B Road 4180 Approximately 4.0 Miles To The Junction Of The Kings Wells Road (County B Road 4190). Exit Right And Proceed In A Southwesterly Direction Along County B Road 4190 Approximately 8.1 Miles To The Intersection Of The East Fork Asphalt Wash Road (County B Road 4250); Exit Right And Proceed In A Northeasterly Direction Along County B Road 4250 Approximately 3.2 Miles To The Intersection Of A Service Road; Exit Right And Follow Service Road In A Northerly Direction Approximately 255 Feet To The Proposed Location. **[This well will be directionally drilled from the Rainbow 11-24-31-16 (API #43-047-36184) well pad, now a two-well pad].**

Total Distance From Vernal, Utah To The Proposed Well Location Is Approximately 59.1 Miles In A Southeasterly Direction.

#### **2. Planned Access Roads:**

The proposed access road will be approximately 255 feet all on-lease.

**ALL NEW CONSTRUCTION IS ON SITLA LANDS.**

The proposed access road will be utilized to transport personnel, equipment and supplies to and from the proposed well site during drilling, completion and production operations. The road will be utilized year round.

The access road will be crowned 2% to 3%, ditched and constructed with a running surface of 18 feet and a maximum disturbed width of 30 feet right-of-way. Maximum grade of road is 5% or less. Graveling or capping the roadbed will be performed as necessary to provide a well constructed, safe road. No fence crossings, culverts, turnouts, cattle guards or major cuts and fills are required. Prior to construction or upgrading, the proposed road shall be cleared of any snow and allowed to dry completely.

Surface disturbance and vehicular traffic will be limited to the proposed location and proposed access route. Any additional area needed will be approved in advance. All construction shall be in conformance with the standards outlined in the BLM and Forest Service publication: Surface Operating Standards for Oil and Gas Exploration and Development. 1989.

The road surface and shoulders will be kept in a safe usable condition and will be maintained in accordance with the original construction standards. All drainage ditches will be kept clear and free flowing and will be maintained according to original construction standards. The access road surface will be kept free of trash during operations. All traffic will be confined to the approved disturbed surface. Road drainage crossings shall be designed so they will not cause siltation or accumulation of debris in the drainage crossing nor shall the drainages be blocked by the road bed. Erosion of drainage ditches by runoff water shall be prevented by diverting water off at frequent intervals by means of cutouts. Upgrading shall not be allowed during muddy conditions. Should mud holes develop, they shall be filled in and detours around them avoided. When snow is removed from the road during the winter months, the snow shall be pushed outside of the borrow ditches and the turnouts kept clear so that snowmelt will be channeled away from the road.

3. **Location of Existing Wells within a One-Mile radius (See "Topo" Map "C" attached):**

The following wells are wells located within a one (1) mile or greater radius of the proposed location.

- |    |       |  |
|----|-------|--|
| a. | None: | Water Wells:   |
| b. | None: | Injection Wells:   |
| c. | None: | Producing Wells:   |
| d. | (2):  | Drilling Wells:  |
|    |       | 1. Asphalt Wash 11-24-42-16, Sec 16, SENE  |
|    |       | 2. Rainbow 11-24-31-16, Sec 16, NWNE   |
| e. | None: | Shut-in Wells:   |
| f. | None: | Temporarily Abandoned Wells:   |
| g. | None: | Disposal Wells:  |
| h. | None: | Abandoned Wells:   |
| i. | None: | Dry Holes:   |
| j. | None: | Observation Wells:   |
| k. | (16): | Pending (staked) Wells:  |
|    |       | 1. Enduring Resources has sixteen other wells staked within one mile of this well. |

4. **Location of Existing and/or Proposed Facilities:**

All production facilities will be located on the disturbed portion of the well pad and at a minimum of 25 feet from the toe of the back slope or the top of the fill slope.

A dike will be constructed completely around those production facilities which contain fluids (i.e. production tanks, produced water tanks and/or heater treater). These dikes will be constructed of compacted subsoil, be impervious, hold 100% of the capacity of the largest tank and be independent of the back cut.

All permanent (on site for six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth tone color to match one of the standard environmental colors, as determined by the Rocky Mountain Five State Inter-Agency Committee

All facilities will be painted within 6 months of installation. The color shall be designated by DOG&M and SITLA. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded.

Any necessary pits will be properly fenced to protect livestock and prevent wildlife entry.

Gas Gathering Pipeline for this well:

**This well is being drilled directionally from the same well pad as the Rainbow 11-24-31-16 and will use the same pipeline.**

If this well is capable of economic production, approximately 75 feet of +/- 3" pipeline would be constructed on State Lands. An off-lease right-of-way will not be required.

The meter run will be housed. The gas gathering line will be buried or anchored down from the wellhead to the meter.

Upon plugging and abandonment, the gas gathering line will be removed and the disturbed area will be re-contoured and restored as near as practical to the original condition. If necessary, re-seeding operations will be performed after completion of other reclamation operations.

**5. Location and Type of Water Supply:**

Whenever practical, water will be obtained from Enduring Resources LLC Water Right Number 49-2215 or Water Right Number 49-2216 (\*See Townships of permitted Use below). If those sources are not available, a new water source shall be submitted prior to commencing operations. (These permits have one-year terms and then must be renewed)

\*Enduring Water Permits' Townships of Use:

T10S-R22E	T11S-R22E	T12S-R22E
T10S-R23E	T11S-R23E	T12S-R23E
T10S-R24E	<b><u>T11S-R24E</u></b>	T12S-R24E

Water will be hauled to the location over the roads marked on "Topo" Maps "A" and "B."

No water well is to be drilled on this lease.

**6. Source of Construction Materials:**

Surface and subsoil materials in the immediate area will be utilized for location and access road construction.

Any gravel will be obtained from a commercial source; however, gravel sized rock debris associated with location and access road construction may be used as access road surfacing material.

**7. Methods of Handling Waste Materials:**

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids, including salts and chemicals, will be contained in the reserve pit will be removed and disposed of at an approved waste disposal facility within 120 days after drilling is terminated.

The reserve pit will be constructed on the location and will not be located within natural drainage, where a flood hazard exists or surface runoff will destroy or damage the pit walls. The reserve pit will be constructed so that it will not leak, break or allow discharge of liquids.

The reserve pit will be lined with ¼ felt and a minimum of 16 mm plastic with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the will be disposed of in the pit.

A chemical portable toilet will be furnished with the drilling rig. The toilet will be replaced periodically utilizing a licensed contractor to transport by truck the portable chemical toilet so that its contents can be delivered to the Vernal Wastewater Treatment Facility in accordance with state and county regulations.

Garbage, trash and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. No trash will be burned on location.

All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig.

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported or disposed of in association with the drilling, completion or testing of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported or disposed of in association with the drilling, completion or testing of this well.

Produced oil will be stored in an oil tank and then hauled by truck to a crude purchaser facility. Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to an approved disposal site.

**8. Ancillary Facilities:**

During drilling operations, approximately 20 days, the site will be a manned camp. Three or four additional trailers will be on location to serve as the crews' housing and eating facilities. These will be located on the perimeter of the pad site within the topsoil stockpiles. Refer to Sheet 4.

**9. Well Site Layout: (Refer to Sheets #2, #3, and #4)**

The attached Location Layout Diagrams described drill pad cross-sections, cuts and fills and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s) and surface material stockpiles(s).

Please see the attached diagram for rig orientation and access roads.

The top soil will be windrowed rather than piled. It will be reseeded and track walker at the time the location is constructed. Seeding will be with the determined during the onsite. (Refer to "Seed Mixture for Windrowed Top Soil Will included:" following herein.

The top soil removed from the pit area will be store separately and will not be reseeded until the pit is reclaimed.

All pits shall be fence to the following minimum standards:

- a. 39 inch net wire shall be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- b. The net wire shall be no more than 2 inches above the ground. The barbed wire shall be 3 inches over the new wire. Total height of the fence shall be at least 42 inches.
- c. Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- d. Standard steel, wood or pipe posts shall be used between the corner braces. Maximum distance between any two fence posts shall be no greater than 16 feet.
- e. All wire shall be stretched by, using a stretching device, before it is attached to corner posts.
- f. The reserve pit fencing will be on three sides during drilling operations and on the fourth side when the rig moves off location. Pits will be fenced and maintained until cleanup.
- g. The reserve pit fencing will be on three sides during drilling operations and on the fourth side when the rig moves off location. Pits will be fenced and maintained until cleanup.
- h. Location size may change prior to drilling the well due to the current rig availability. If the proposed location is not large enough to accommodate the drilling, the location will be re-surveyed and a Form 9 will be submitted.

**10. Plans for Surface Reclamation:**

**Producing Location:**

- a. Immediately upon the wells' completion (two-well pad) the location and surrounding area will be cleared of all unused tubing, equipment, materials, trash and debris not required for production. Immediately upon well completion any hydrocarbons in the pit shall be removed in accordance with 40CFR 3162.7.
- b. Before any dirt work associated with location restoration takes place, the reserve pit shall be as dry as possible. All debris in it will be removed. Other waste and spoil materials will be disposed of immediately upon completion of operations.
- c. The reserve pit and that portion of the location not needed for production facilities/operations (or drilling other directional wells) will be re-contoured to the approximated natural contours. The reserve pit will be reclaimed within 90 days from the date of well completion, weather permitting.
- d. To prevent surface water(s) from standing (ponding) on the reclaimed reserve pit area, final reclamation of the reserve pit will consist of "mounding" the surface 3 feet above surrounding round surface to allow the reclaimed pit area to drain effectively.
- e. Upon completion of back filling, leveling and re-contouring, the stockpiled topsoil will be spread evenly over the reclaimed area(s).

**Dry Hole/Abandoned Location:**

- i. Abandoned well sites, roads and other disturbed areas will be restored as nearly as practical to their original condition. Where applicable, these conditions include the re-establishment of irrigation systems, the re-establishment of appropriate soil conditions and re-establishment of vegetation as specified.
- ii. All disturbed surfaces will be re-contoured to the approximated natural contours with reclamation of the well pad and access road to be performed as soon as practical after final abandonment. If necessary, re-seeding operations will be performed after completion of other reclamation operations.

**Seed Mixture for Windrowed Top Soil Will Included:**

To be provided by the DOG&M and/or SITLA.

**11. Surface Ownership: Location, Access and Pipeline Route:**

Wellsite: SITLA

Access: SITLA

Pipeline: SITLA



**12. Other Information**

**On-site Inspection for Location, Access and Pipeline Route:**

***On-site has already been conducted for the Rainbow 11-24-31-16 well. This well will be drilled directionally from the same pad.***

**Special Conditions of Approval:**

- Tanks and Production Equipment shall be painted pursuant of SITLA and DOG&M.
- Surface Gathering Pipeline shall be 3" or less

**Archeology:**

- a. A Cultural Resource Inventory Report is pending and to be prepared by Montgomery Archaeological Consultants.

**Paleontology:**

- a. A Paleontology Reconnaissance Report is pending and to be prepared by Intermountain Paleo-Consulting.

If, during operations, any archaeological or historical sites, or any objects of antiquity (subject to the Antiquities Act of June 8, 1906) are discovered, all operations which would affect such sites will be suspended and the discovery reported promptly to the surface management agency.

**13. Lessee's or Operator's Representatives:**

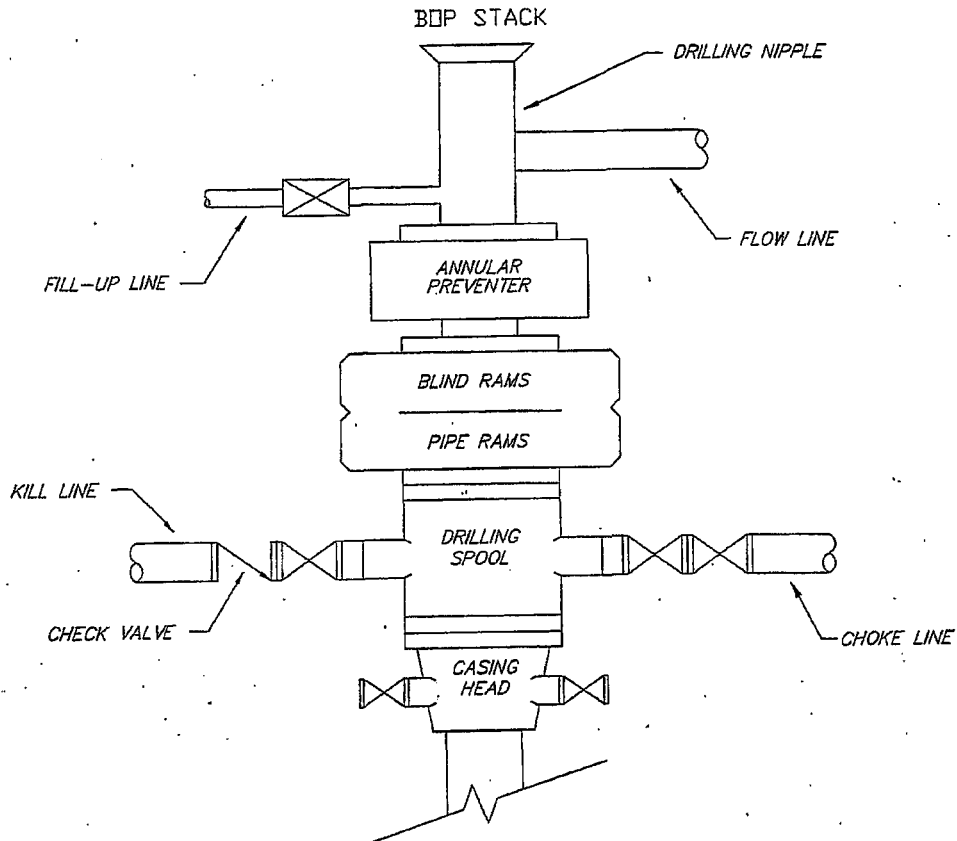
**Representatives:**

Alvin R. (Al) Arlian  
Landman – Regulatory Specialist  
Enduring Resources, LLC  
475 17<sup>th</sup> Street, Suite 1500  
Denver, Colorado 80202  
Office Tel: 303-350-5114  
Fax Tel: 303-573-0461  
[aarlian@enduringresources.com](mailto:aarlian@enduringresources.com)

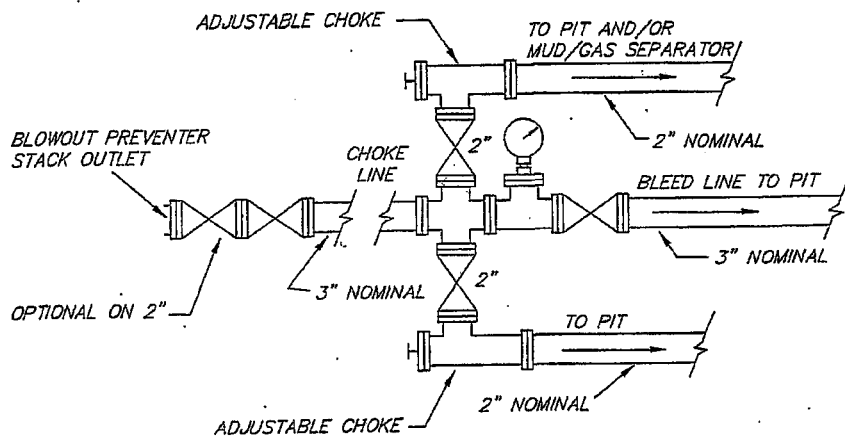
Teme Singleton  
Drilling Engineer  
Enduring Resources, LLC  
475 17<sup>th</sup> Street, Suite 1500  
Denver, Colorado 80202  
Office Tel: 303-573-5711  
Fax Tel: 303-573-0461  
[tsingleton@enduringresources.com](mailto:tsingleton@enduringresources.com)

# ENDURING RESOURCES, LLC

## TYPICAL 3,000 p.s.i. BLOWOUT PREVENTER SCHEMATIC



## TYPICAL 3,000 p.s.i. CHOKE MANIFOLD SCHEMATIC





**Weatherford<sup>®</sup>**

## **Drilling Services**

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## **Proposal**

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### **ENDURING RESOURCES, INC.**

ASPHALT WASH 11-24-41-16

UINTAH COUNTY, UTAH

WELL FILE: **PLAN 1**

OCTOBER 23, 2006

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**Weatherford International, Ltd.**  
15710 JOHN F. KENNEDY Blvd, Suite 700  
Houston, Texas 77060 USA  
+1.281.260.1300 Main  
+1.281.260.4730 Fax  
[www.weatherford.com](http://www.weatherford.com)

# ENDURING RESOURCES, L.L.C.

ASPHALT WASH #11-24-41-16  
NE/4 NE/4 SEC 16-T11S-R24E  
836' FNL, 2160' FEL  
UINTAH COUNTY, UTAH



## Weatherford

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	83.20	0.00	0.00	0.00	0.00	0.00	0.00	
2	500.00	0.00	83.20	500.00	0.00	0.00	0.00	0.00	0.00	NUDGE
3	1000.00	10.00	83.20	997.47	5.15	43.22	2.00	83.20	43.52	HOLD
4	2018.00	10.00	83.20	2000.00	26.08	218.75	0.00	0.00	220.30	CASING POINT
5	2078.00	10.00	83.21	2059.09	27.32	229.09	0.00	0.00	230.72	BUILD
6	2473.00	29.75	83.21	2428.72	43.13	361.78	5.00	0.00	364.34	HOLD
7	4399.76	29.75	83.21	4101.54	156.24	1311.15	0.00	0.00	1320.43	DROP
8	5143.51	0.00	83.21	4812.32	178.58	1498.62	4.00	180.00	1509.22	HOLD
9	6491.20	0.00	83.21	6160.00	178.58	1498.62	0.00	0.00	1509.22	PBHL



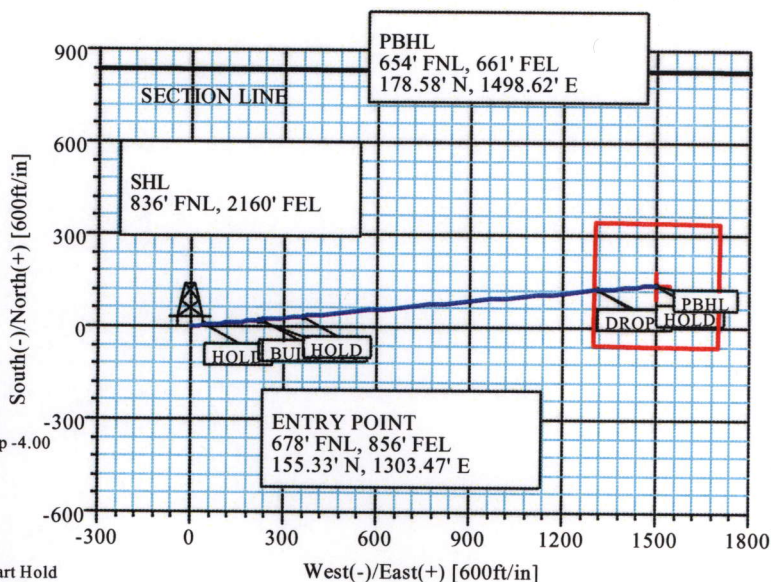
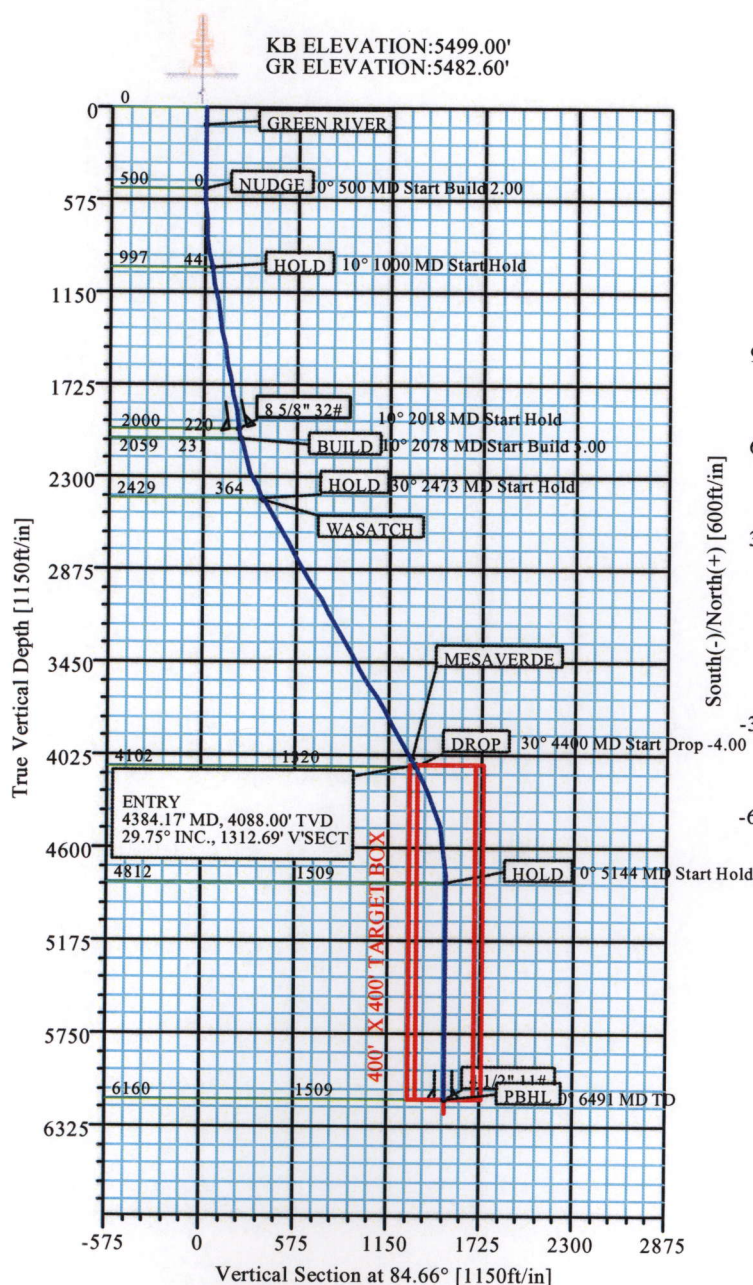
Azimuths to True North  
Magnetic North: 11.55°

Magnetic Field  
Strength: 52807nT  
Dip Angle: 65.96°  
Date: 10/23/2006  
Model: bggm2005

TOTAL CORRECTION TO TRUE NORTH: 11.55°

FORMATION TOP DETAILS			
No.	TVDPath	MDPath	Formation
1	108.00	108.00	GREEN RIVER
2	2438.00	2483.68	WASATCH
3	4049.00	4339.25	MESAVERDE

CASING DETAILS				
No.	TVD	MD	Name	Size
1	2000.00	2018.00	8 5/8" 32#	8.625
2	6160.00	6491.20	4 1/2" 11#	0.000



SITE DETAILS	
ASPHALT WASH 11-24-41-16	
Site Centre Latitude:	39°52'01.040N
Longitude:	109°14'03.060W
Ground Level:	5482.60
Positional Uncertainty:	0.00
Convergence:	1.45

# WEATHERFORD DRILLING SERVICES

## WELL PLAN REPORT

<b>Company:</b> Enduring Resources		<b>Date:</b> 10/24/2006	<b>Time:</b> 09:12:25	<b>Page:</b> 1
<b>Field:</b> Uintah, Utah		<b>Co-ordinate(NE) Reference:</b> Well: ASPHALT WASH 11-24-41-16		
<b>Site:</b> ASPHALT WASH 11-24-41-16		<b>Vertical (TVD) Reference:</b> SITE 5499.0		
<b>Well:</b> ASPHALT WASH 11-24-41-16		<b>Section (VS) Reference:</b> Well (0.00N,0.00E,84.66Azi)		
<b>Wellpath:</b> 1		<b>Survey Calculation Method:</b> Minimum Curvature <b>Db:</b> Sybase		

<b>Plan:</b> Plan #1	<b>Date Composed:</b> 10/23/2006
<b>Principal:</b> Yes	<b>Version:</b> 1
	<b>Tied-to:</b> From Surface

<b>Field:</b> Uintah, Utah Utah Central Zone U.S.A.	
<b>Map System:</b> US State Plane Coordinate System 1983	<b>Map Zone:</b> Utah, Central Zone
<b>Geo Datum:</b> GRS 1980	<b>Coordinate System:</b> Well Centre
<b>Sys Datum:</b> Mean Sea Level	<b>Geomagnetic Model:</b> bggm2005

<b>Well:</b> ASPHALT WASH 11-24-41-16		<b>Slot Name:</b>	
<b>Well Position:</b>	<b>+N/-S</b> 0.00 ft <b>Northing:</b> 7128331.84 ft	<b>Latitude:</b> 39 52 1.040 N	
	<b>+E/-W</b> 0.00 ft <b>Easting:</b> 2276317.25 ft	<b>Longitude:</b> 109 14 3.060 W	
<b>Position Uncertainty:</b> 0.00 ft			

<b>Wellpath:</b> 1		<b>Drilled From:</b> Surface	
		<b>Tie-on Depth:</b> 0.00 ft	
<b>Current Datum:</b> SITE	<b>Height</b> 5499.00 ft	<b>Above System Datum:</b> Mean Sea Level	
<b>Magnetic Data:</b> 10/23/2006		<b>Declination:</b> 11.55 deg	
<b>Field Strength:</b> 52807 nT		<b>Mag Dip Angle:</b> 65.96 deg	
<b>Vertical Section:</b> Depth From (TVD)	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
ft	ft	ft	deg
0.00	0.00	0.00	84.66

<b>Site:</b> ASPHALT WASH 11-24-41-16	
<b>Site Position:</b>	
<b>From:</b> Geographic	<b>Northing:</b> 7128331.84 ft
<b>Position Uncertainty:</b> 0.00 ft	<b>Easting:</b> 2276317.25 ft
<b>Ground Level:</b> 5482.60 ft	<b>Latitude:</b> 39 52 1.040 N
	<b>Longitude:</b> 109 14 3.060 W
	<b>North Reference:</b> True
	<b>Grid Convergence:</b> 1.45 deg

Plan Section Information										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	84.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	84.65	500.00	0.00	0.00	0.00	0.00	0.00	84.65	
1000.00	10.00	84.65	997.47	4.06	43.33	2.00	2.00	0.00	84.65	
2018.00	10.00	84.65	2000.00	20.53	219.34	0.00	0.00	0.00	0.00	
2078.00	10.00	84.66	2059.09	21.51	229.71	0.00	0.00	0.00	0.00	
2473.00	29.75	84.66	2428.72	33.95	362.75	5.00	5.00	0.00	0.00	
4399.76	29.75	84.66	4101.54	122.98	1314.69	0.00	0.00	0.00	0.00	
5143.51	0.00	84.66	4812.32	140.56	1502.66	4.00	-4.00	0.00	180.00	
6491.20	0.00	84.66	6160.00	140.56	1502.66	0.00	0.00	0.00	0.00	PBHL

Survey										
MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Comment
500.00	0.00	84.65	500.00	0.00	0.00	0.00	0.00	0.00	0.00	NUDGE
600.00	2.00	84.65	599.98	0.16	1.74	1.75	2.00	2.00	0.00	
700.00	4.00	84.65	699.84	0.65	6.95	6.98	2.00	2.00	0.00	
800.00	6.00	84.65	799.45	1.46	15.63	15.69	2.00	2.00	0.00	
900.00	8.00	84.65	898.70	2.60	27.76	27.88	2.00	2.00	0.00	
1000.00	10.00	84.65	997.47	4.06	43.33	43.52	2.00	2.00	0.00	HOLD
1100.00	10.00	84.65	1095.95	5.68	60.62	60.89	0.00	0.00	0.00	
1200.00	10.00	84.65	1194.43	7.29	77.91	78.25	0.00	0.00	0.00	
1300.00	10.00	84.65	1292.91	8.91	95.20	95.62	0.00	0.00	0.00	
1400.00	10.00	84.65	1391.39	10.53	112.49	112.98	0.00	0.00	0.00	
1500.00	10.00	84.65	1489.87	12.15	129.78	130.35	0.00	0.00	0.00	
1600.00	10.00	84.65	1588.35	13.77	147.07	147.71	0.00	0.00	0.00	
1700.00	10.00	84.65	1686.83	15.39	164.36	165.08	0.00	0.00	0.00	

# WEATHERFORD DRILLING SERVICES

## WELL PLAN REPORT

**Company:** Enduring Resources  
**Field:** Uintah, Utah  
**Site:** ASPHALT WASH 11-24-41-16  
**Well:** ASPHALT WASH 11-24-41-16  
**Wellpath:** 1

**Date:** 10/24/2006 **Time:** 09:12:25 **Page:** 2  
**Co-ordinate(NE) Reference:** Well: ASPHALT WASH 11-24-41-16  
**Vertical (TVD) Reference:** SITE 5499.0  
**Section (VS) Reference:** Well (0.00N,0.00E,84.66Azi)  
**Survey Calculation Method:** Minimum Curvature **Db:** Sybase

### Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Comment
1800.00	10.00	84.65	1785.31	17.01	181.65	182.44	0.00	0.00	0.00	
1900.00	10.00	84.65	1883.79	18.62	198.94	199.81	0.00	0.00	0.00	
2000.00	10.00	84.65	1982.27	20.24	216.23	217.17	0.00	0.00	0.00	
2018.00	10.00	84.65	2000.00	20.53	219.34	220.30	0.00	0.00	0.00	8 5/8" 32# BUILD
2078.00	10.00	84.66	2059.09	21.51	229.71	230.72	0.00	0.00	0.01	
2100.00	11.10	84.66	2080.72	21.88	233.72	234.74	5.00	5.00	0.00	
2200.00	16.10	84.66	2177.88	24.07	257.13	258.25	5.00	5.00	0.00	
2300.00	21.10	84.66	2272.63	27.04	288.87	290.14	5.00	5.00	0.00	
2400.00	26.10	84.66	2364.24	30.77	328.72	330.16	5.00	5.00	0.00	HOLD WASATCH
2473.00	29.75	84.66	2428.72	33.95	362.75	364.34	5.00	5.00	0.00	
2483.68	29.75	84.66	2438.00	34.44	368.03	369.64	0.00	0.00	0.00	
2500.00	29.75	84.66	2452.17	35.20	376.09	377.74	0.00	0.00	0.00	
2600.00	29.75	84.66	2538.99	39.82	425.50	427.36	0.00	0.00	0.00	
2700.00	29.75	84.66	2625.81	44.44	474.91	476.98	0.00	0.00	0.00	
2800.00	29.75	84.66	2712.63	49.06	524.31	526.60	0.00	0.00	0.00	
2900.00	29.75	84.66	2799.45	53.68	573.72	576.22	0.00	0.00	0.00	
3000.00	29.75	84.66	2886.27	58.30	623.12	625.85	0.00	0.00	0.00	
3100.00	29.75	84.66	2973.08	62.92	672.53	675.47	0.00	0.00	0.00	
3200.00	29.75	84.66	3059.90	67.54	721.94	725.09	0.00	0.00	0.00	
3300.00	29.75	84.66	3146.72	72.16	771.34	774.71	0.00	0.00	0.00	
3400.00	29.75	84.66	3233.54	76.78	820.75	824.33	0.00	0.00	0.00	
3500.00	29.75	84.66	3320.36	81.41	870.15	873.95	0.00	0.00	0.00	
3600.00	29.75	84.66	3407.18	86.03	919.56	923.58	0.00	0.00	0.00	
3700.00	29.75	84.66	3494.00	90.65	968.97	973.20	0.00	0.00	0.00	
3800.00	29.75	84.66	3580.82	95.27	1018.37	1022.82	0.00	0.00	0.00	
3900.00	29.75	84.66	3667.64	99.89	1067.78	1072.44	0.00	0.00	0.00	
4000.00	29.75	84.66	3754.46	104.51	1117.18	1122.06	0.00	0.00	0.00	
4100.00	29.75	84.66	3841.28	109.13	1166.59	1171.68	0.00	0.00	0.00	
4200.00	29.75	84.66	3928.10	113.75	1216.00	1221.31	0.00	0.00	0.00	
4300.00	29.75	84.66	4014.92	118.37	1265.40	1270.93	0.00	0.00	0.00	
4339.25	29.75	84.66	4049.00	120.19	1284.79	1290.40	0.00	0.00	0.00	MESAVERDE ENTRY
4384.17	29.75	84.66	4088.00	122.26	1306.99	1312.69	0.00	0.00	0.00	
4399.76	29.75	84.66	4101.54	122.98	1314.69	1320.43	0.00	0.00	0.00	DROP
4400.00	29.75	84.66	4101.74	122.99	1314.81	1320.55	0.00	0.00	0.00	
4500.00	25.74	84.66	4190.23	127.33	1361.14	1367.09	4.01	-4.01	0.00	
4600.00	21.74	84.66	4281.75	131.08	1401.22	1407.34	4.00	-4.00	0.00	
4700.00	17.74	84.66	4375.86	134.22	1434.84	1441.11	4.00	-4.00	0.00	
4800.00	13.74	84.66	4472.09	136.75	1461.85	1468.23	4.00	-4.00	0.00	
4900.00	9.74	84.66	4569.97	138.64	1482.10	1488.57	4.00	-4.00	0.00	
5000.00	5.74	84.66	4669.04	139.89	1495.51	1502.04	4.00	-4.00	0.00	
5100.00	1.74	84.66	4768.81	140.50	1502.00	1508.56	4.00	-4.00	0.00	
5143.51	0.00	84.66	4812.32	140.56	1502.66	1509.22	4.00	-4.00	0.00	HOLD
5200.00	0.00	84.66	4868.80	140.56	1502.66	1509.22	0.00	0.00	0.00	
5300.00	0.00	84.66	4968.80	140.56	1502.66	1509.22	0.00	0.00	0.00	
5400.00	0.00	84.66	5068.80	140.56	1502.66	1509.22	0.00	0.00	0.00	
5500.00	0.00	84.66	5168.80	140.56	1502.66	1509.22	0.00	0.00	0.00	
5600.00	0.00	84.66	5268.80	140.56	1502.66	1509.22	0.00	0.00	0.00	
5700.00	0.00	84.66	5368.80	140.56	1502.66	1509.22	0.00	0.00	0.00	
5800.00	0.00	84.66	5468.80	140.56	1502.66	1509.22	0.00	0.00	0.00	
5900.00	0.00	84.66	5568.80	140.56	1502.66	1509.22	0.00	0.00	0.00	
6000.00	0.00	84.66	5668.80	140.56	1502.66	1509.22	0.00	0.00	0.00	
6100.00	0.00	84.66	5768.80	140.56	1502.66	1509.22	0.00	0.00	0.00	



# WEATHERFORD DRILLING SERVICES

## WELL PLAN REPORT

<b>Company:</b> Enduring Resources <b>Field:</b> Uintah, Utah <b>Site:</b> ASPHALT WASH 11-24-41-16 <b>Well:</b> ASPHALT WASH 11-24-41-16 <b>Wellpath:</b> 1	<b>Date:</b> 10/24/2006 <b>Time:</b> 09:12:25 <b>Page:</b> 3 <b>Co-ordinate(NE) Reference:</b> Well: ASPHALT WASH 11-24-41-16 <b>Vertical (TVD) Reference:</b> SITE 5499.0 <b>Section (VS) Reference:</b> Well (0.00N,0.00E,84.66Azi) <b>Survey Calculation Method:</b> Minimum Curvature <b>Db:</b> Sybase
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### Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Comment
6200.00	0.00	84.66	5868.80	140.56	1502.66	1509.22	0.00	0.00	0.00	
6300.00	0.00	84.66	5968.80	140.56	1502.66	1509.22	0.00	0.00	0.00	
6400.00	0.00	84.66	6068.80	140.56	1502.66	1509.22	0.00	0.00	0.00	
6491.20	0.00	84.66	6160.00	140.56	1502.66	1509.22	0.00	0.00	0.00	PBHL

### Targets

Name	Description Dip. Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	← Latitude → Deg Min Sec			← Longitude → Deg Min Sec		
PBHL		6160.00	140.56	1502.66	7128510.4222778	15.87	39	52	2.429 N	109	13	43.787 W
-Rectangle (400x400)												
-Plan hit target												

### Annotation

MD ft	TVD ft	
500.00	500.00	NUDGE
1000.00	997.47	HOLD
2018.00	2000.00	CASING PT
2078.00	2059.09	BUILD
2473.00	2428.72	HOLD
4384.17	4088.00	ENTRY
4399.76	4101.54	DROP
5143.51	4812.31	HOLD

### Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
108.00	108.00	GREEN RIVER		0.00	0.00
2483.68	2438.00	WASATCH		0.00	0.00
4339.25	4049.00	MESAVERDE		0.00	0.00

### Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
2018.00	2000.00	8.625	12.250	8 5/8" 32#
6491.20	6160.00	0.000	0.000	4 1/2" 11#





CAMERA ANGLE: SOUTHEASTERLY



PHOTO VIEW: FROM BEGINNING OF ACCESS ROAD

CAMERA ANGLE: NORTHERLY

## ENDURING RESOURCES

### Asphalt Wash 11-24-41-16

Other wells on this pad: Rainbow 11-24-31-16  
SECTION 16, T11S, R24E, S.L.B.&M.

## LOCATION PHOTOS

TAKEN BY: M.S.B.

DRAWN BY: M.W.W.

DATE TAKEN: 10-06-06

DATE DRAWN: 10-12-06

REVISED:

**Timberline Land Surveying, Inc.**  
38 West 100 North Vernal, Utah 84078  
(435) 789-1365

SHEET  
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OF 9



# ENDURING RESOURCES

## WELL PAD INTERFERENCE PLAT ASPHALT WASH 11-24-41-16 & RAINBOW 11-24-31-16



BASIS OF ELEVATION IS BENCH MARK 89  
EAM 1965 LOCATED IN THE WEST 1/2  
OF SECTION 5, T12S, R24E, S.L.B.&M.  
THE ELEVATION OF THIS BENCH MARK IS  
SHOWN ON THE ARCHY BENCH SE 7.5  
MIN. QUADRANGLE AS BEING 6075'.

BASIS OF BEARINGS IS THE EAST  
LINE OF THE NE 1/4 OF SECTION  
16, T11S, R24E, S.L.B.&M. WHICH IS  
TAKEN FROM GLOBAL POSITIONING  
SATELLITE OBSERVATIONS TO BEAR  
N00°07'23"W.

### SURFACE POSITION FOOTAGES:

ASPHALT WASH 11-24-41-16  
836' FNL & 2160' FEL

RAINBOW 11-24-31-16  
845' FNL & 2136' FEL

ASPHALT WASH 11-24-41-16

RAINBOW 11-24-31-16

N83°12'33"E - 1508.90'  
(To Bottom Hole)

S67°55'49"E

### BOTTOM HOLE FOOTAGES

ASPHALT WASH 11-24-41-16  
654' FNL & 661' FEL

### RELATIVE COORDINATES

From Surface Position to Bottom Hole

WELL	NORTH	EAST
41-16	178'	1498'

EXISTING GRADED GROUND  
ELEVATION OF PAD IS 5482.6'

### LATITUDE & LONGITUDE

Surface Position - (NAD 83) Autonomous

WELL	N. LATITUDE	W. LONGITUDE
41-16	39°52'01.04"	109°14'03.06"
31-16	39°52'00.94"	109°14'02.76"

### LATITUDE & LONGITUDE

Bottom Hole - (NAD 83) Autonomous

WELL	N. LATITUDE	W. LONGITUDE
41-16	39°52'02.79"	109°13'43.85"



SCALE

Section 16, T11S, R24E, S.L.B.&M.

Date Surveyed:  
10-06-06

Date Drawn:  
10-12-06

Date Last Revision:

Surveyed By: B.J.S.

Drawn By: M.W.W.

Scale: 1" = 60'

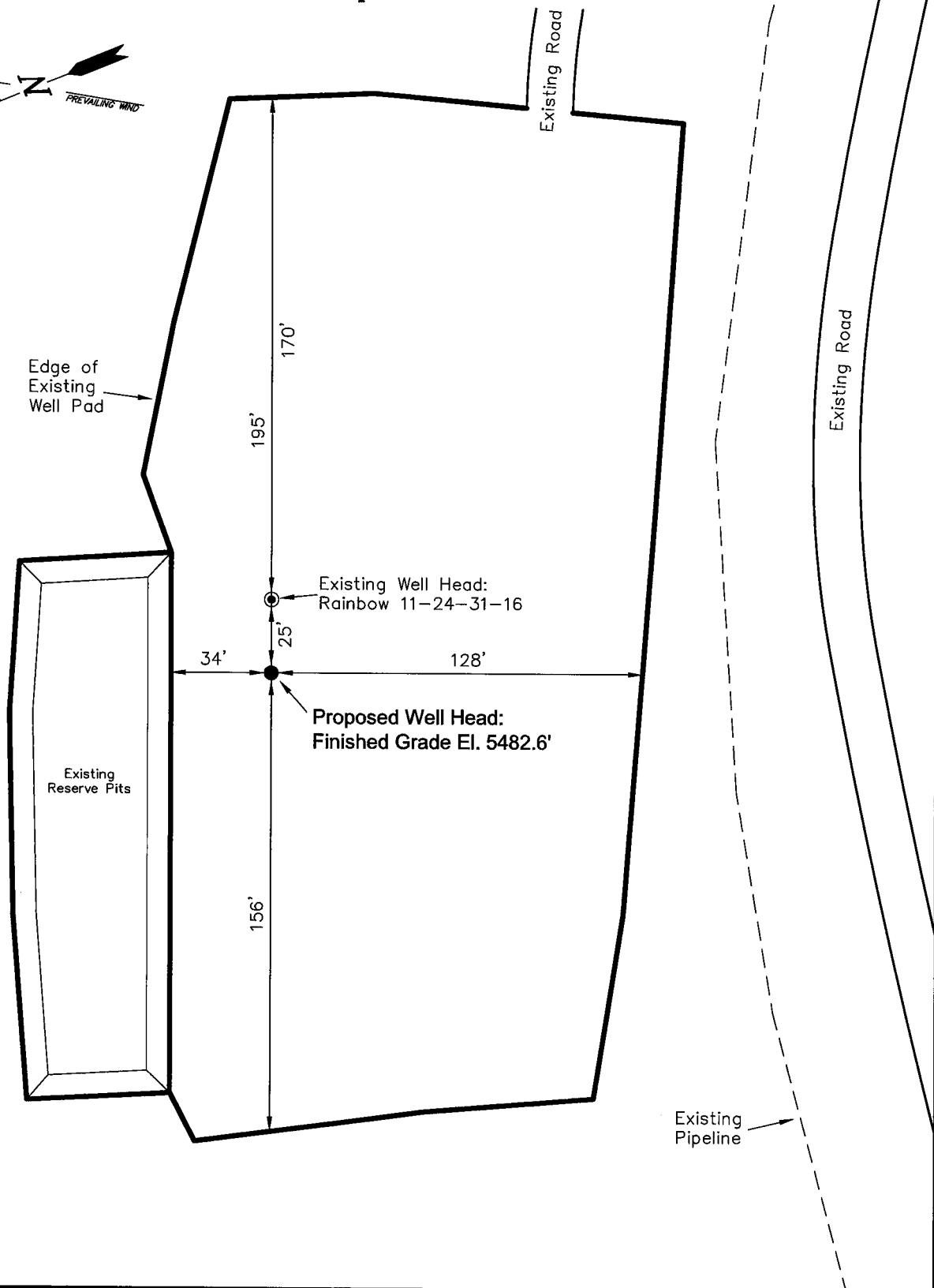
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# ENDURING RESOURCES

SITE MAP - ASPHALT WASH 11-24-41-16

Other wells on this pad: RAINBOW 11-24-31-16



Section 16, T11S, R24E, S.L.B.&M.

Date Surveyed:  
10-06-06

Date Drawn:  
10-12-06

Date Last Revision:

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**Land Surveying, Inc.**

SHEET  
**4**  
OF 9

Surveyed By: B.J.S.

Drawn By: M.W.W.

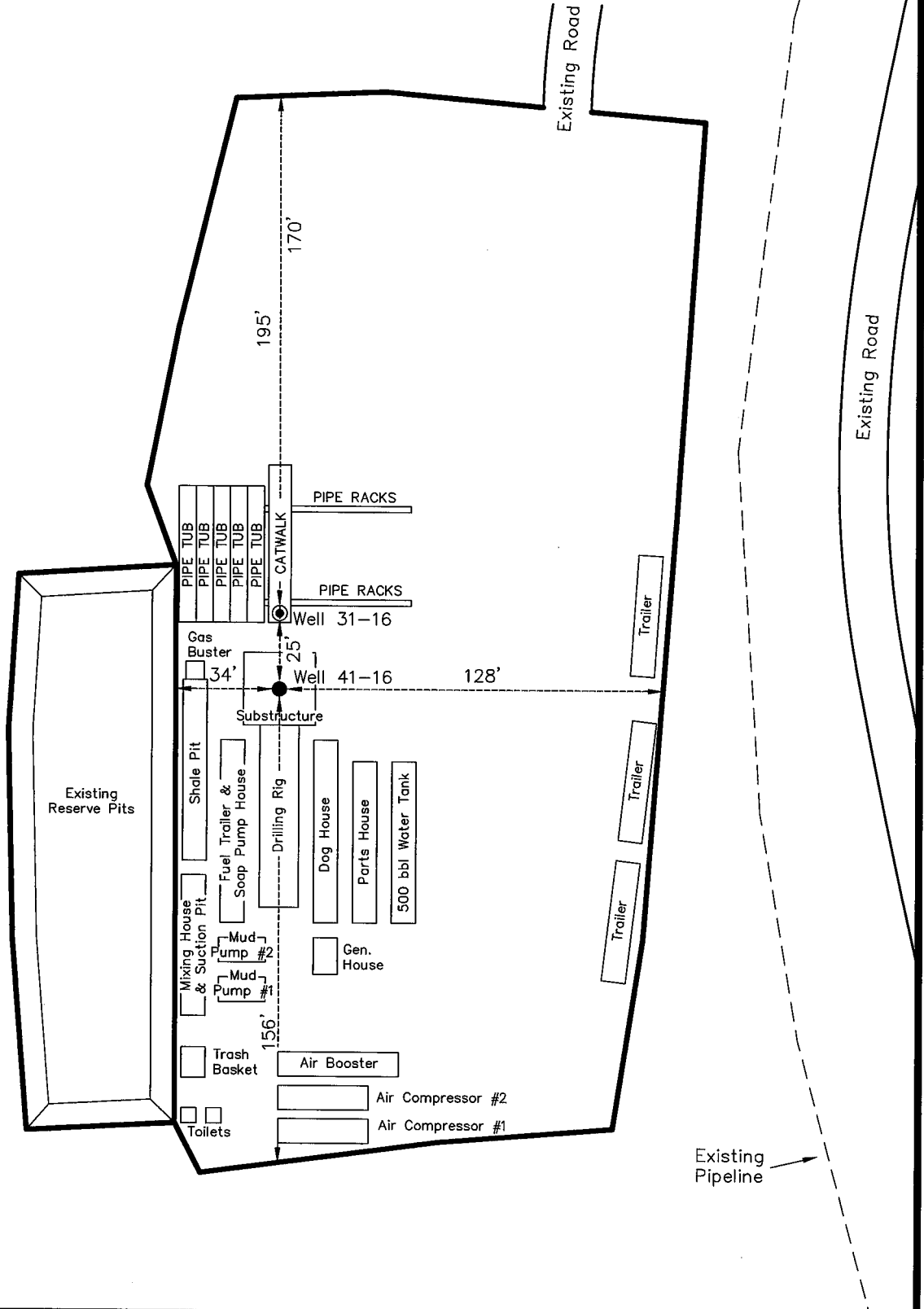
Scale: 1" = 50'

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# ENDURING RESOURCES

## TYPICAL RIG LAYOUT - ASPHALT WASH 11-24-41-16

Other wells on this pad: RAINBOW 11-24-31-16



Section 16, T11S, R24E, S.L.B.&M.

Date Surveyed:  
10-06-06

Date Drawn:  
10-12-06

Date Last Revision:

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**SHEET**  
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**OF 9**

Surveyed By: B.J.S.

Drawn By: M.W.W.

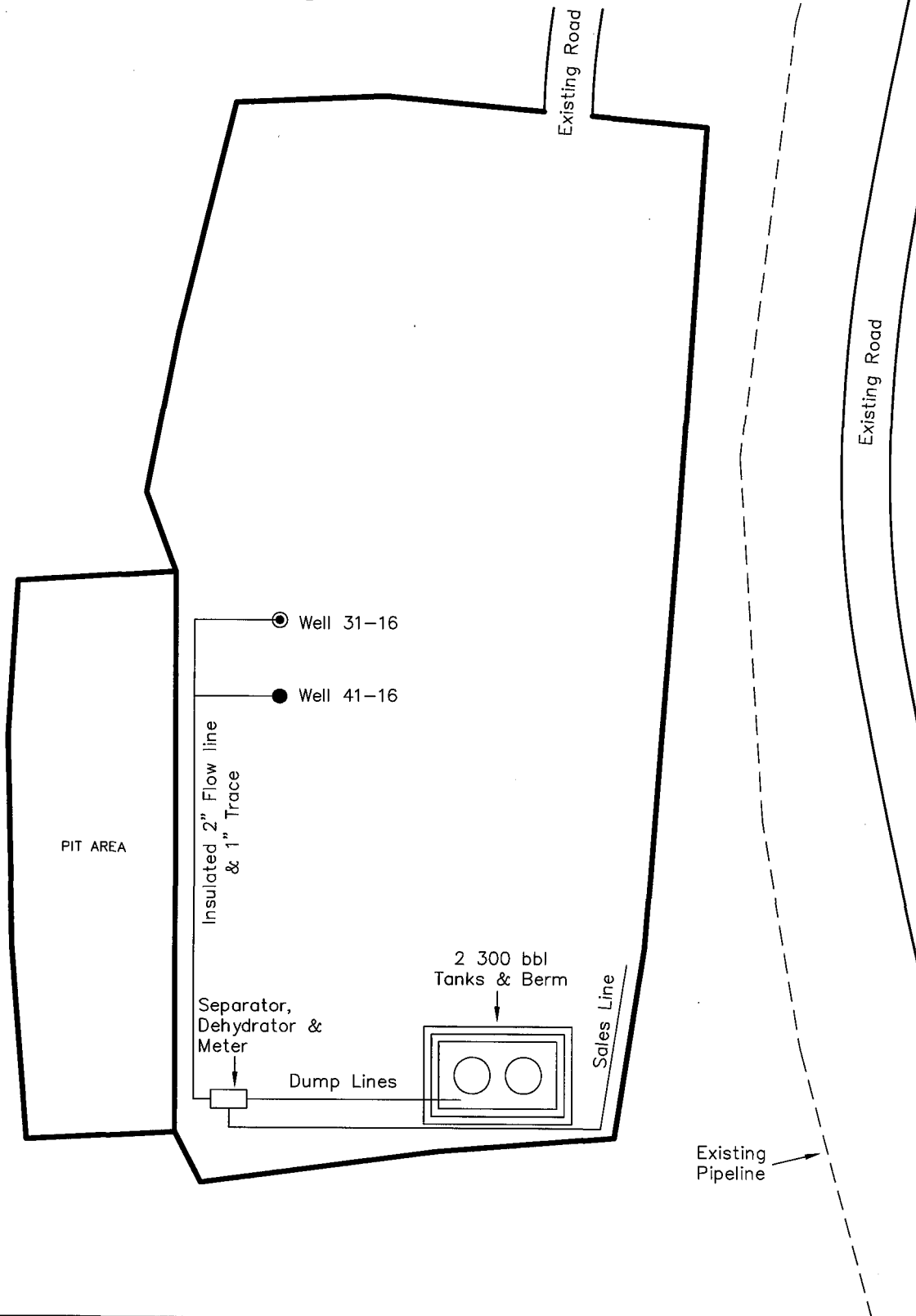
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# ENDURING RESOURCES

TYPICAL PRODUCTION LAYOUT - ASPHALT WASH 11-24-41-16

Other wells on this pad: RAINBOW 11-24-31-16



Section 16, T11S, R24E, S.L.B.&M.

Date Surveyed:  
10-06-06

Date Drawn:  
10-12-06

Date Last Revision:

Surveyed By: B.J.S.

Drawn By: M.W.W.

Scale: 1" = 50'

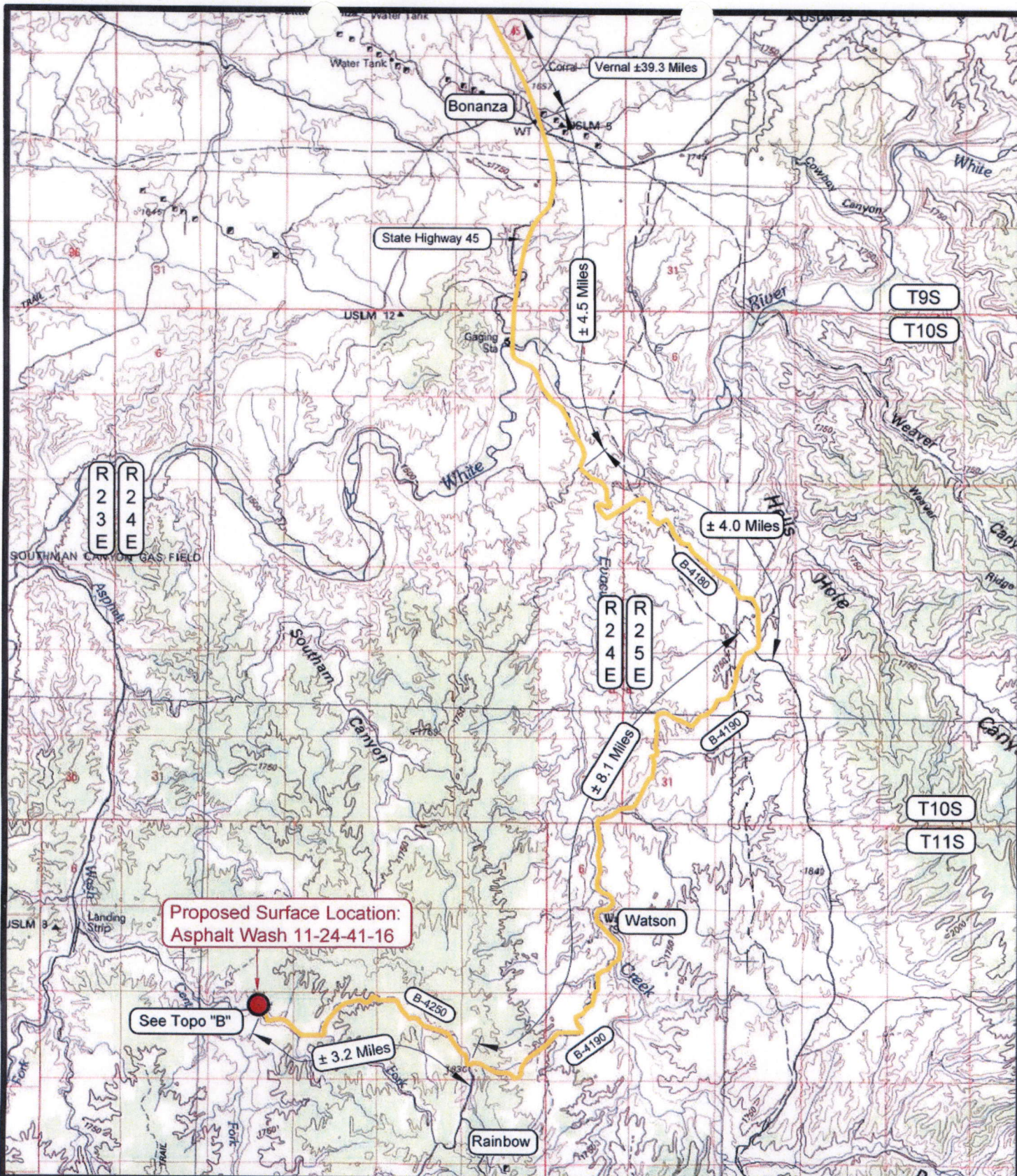
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Proposed Surface Location:  
Asphalt Wash 11-24-41-16

See Topo "B"

#### LEGEND

- PROPOSED ACCESS ROAD
- = SUBJECT WELL
- = OTHER WELLS
- = EXISTING ROAD
- = EXISTING ROAD (TO BE IMPROVED)
- (B-5460) = COUNTY ROAD CLASS & NUMBER

#### TOPOGRAPHIC MAP "A"

SCALE: 1:100,000

DRAWN BY: M.W.W.

DATE SURVEYED: 10-06-06

DATE DRAWN: 10-12-06

REVISED:

#### ENDURING RESOURCES

#### Asphalt Wash 11-24-41-16

Other wells on this pad: Rainbow 11-24-31-16  
SECTION 16, T11S, R24E, S.L.B.&M.

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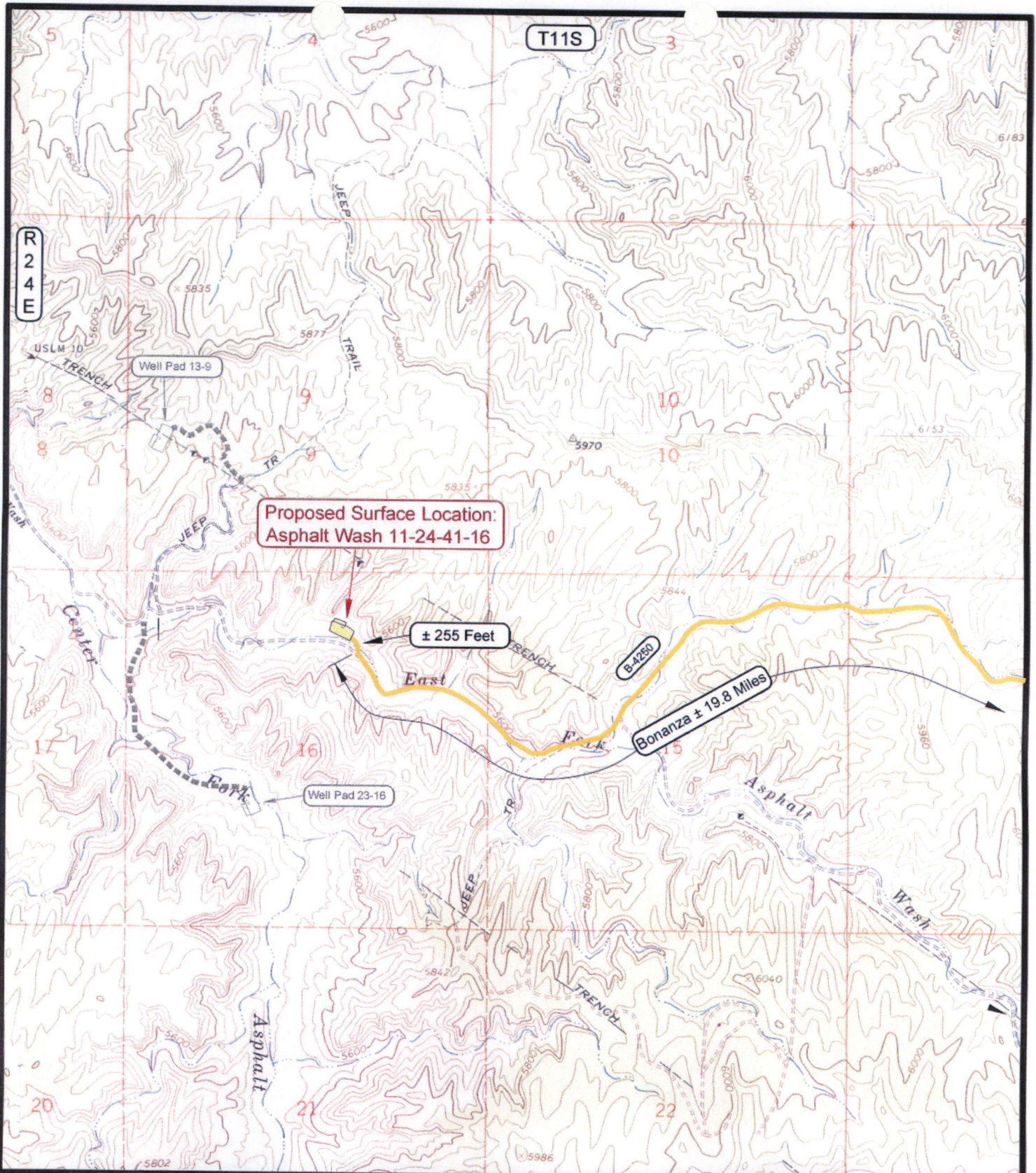
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SHEET

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#### LEGEND

- PROPOSED ACCESS ROAD
- = SUBJECT WELL
- = LEASE LINE AND / OR PROPERTY LINE
- = OTHER WELLS
- = EXISTING ROAD
- = EXISTING ROAD (TO BE IMPROVED)
- B-5460 = COUNTY ROAD CLASS & NUMBER

#### TOPOGRAPHIC MAP "B"

SCALE: 1" = 2000'

DRAWN BY: M.W.W.

DATE SURVEYED: 10-06-06

DATE DRAWN: 10-12-06

REVISED:

#### ENDURING RESOURCES

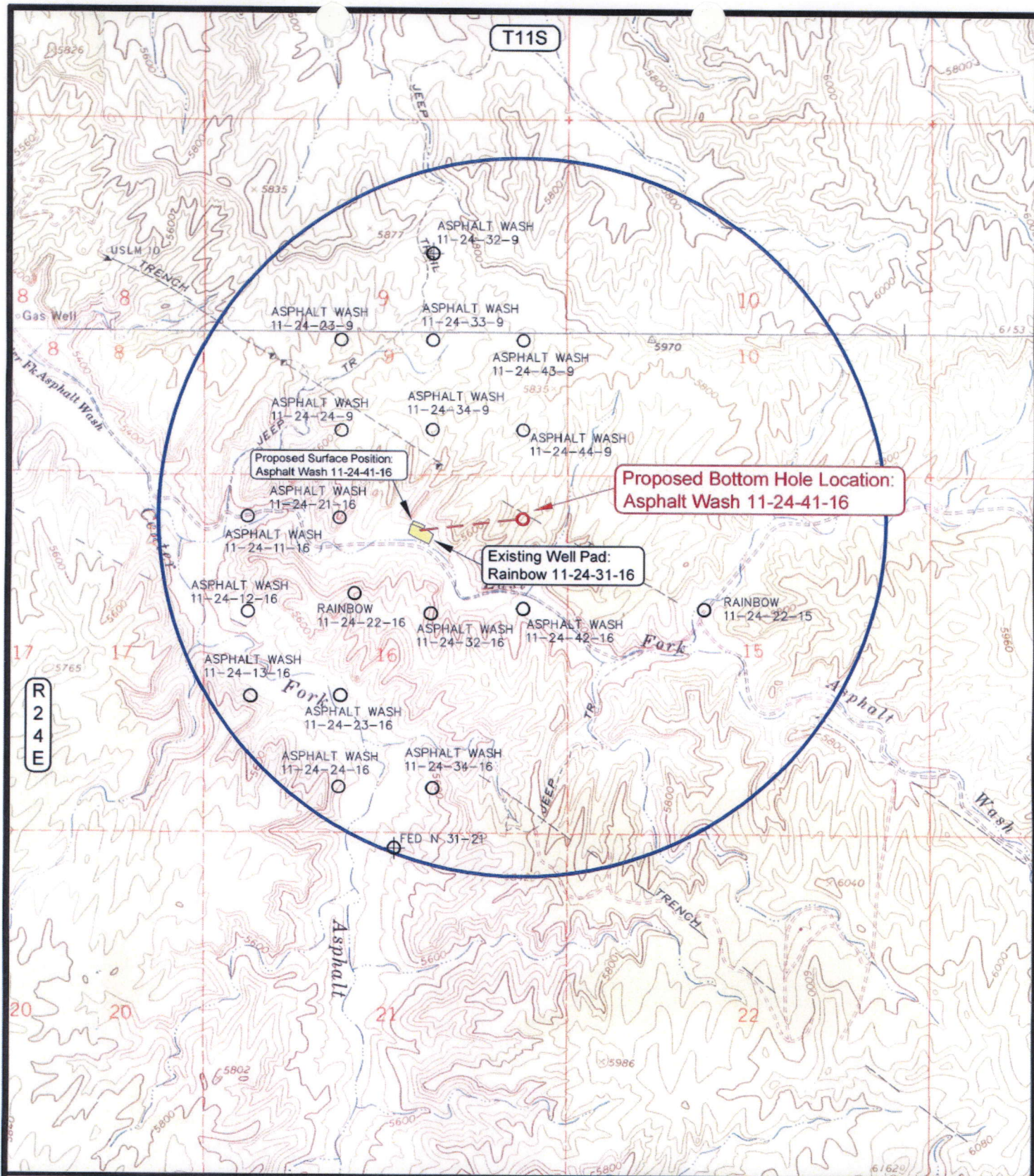
#### Asphalt Wash 11-24-41-16

Other wells on this pad: Rainbow 11-24-31-16  
SECTION 16, T11S, R24E, S.L.B.&M.

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#### LEGEND

- |                    |                                |
|--------------------|--------------------------------|
| ⊗ = DISPOSAL WELL  | ⊗ = WATER WELL                 |
| ● = PRODUCING WELL | ● = ABANDONED WELL             |
| ● = SHUT IN WELL   | ● = TEMPORARILY ABANDONED WELL |
| ○ = PROPOSED WELL  | ⊕ = ABANDONED LOCATION         |

#### ENDURING RESOURCES

**Asphalt Wash 11-24-41-16**  
**SECTION 16, T11S, R24E, S.L.B.&M.**

**TOPOGRAPHIC MAP "C"**

DATE SURVEYED: 10-06-06

DATE DRAWN: 10-12-06

SCALE: 1" = 2000'

DRAWN BY: M.W.W.

REVISED:

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(435) 789-1365

**SHEET**  
**9**  
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**WORKSHEET**  
**APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 10/27/2006

API NO. ASSIGNED: 43-047-38768

WELL NAME: ASPHALT WASH 11-24-41-16

OPERATOR: ENDURING RESOURCES, LLC ( N2750 )

CONTACT: EVETTE BISSETT

PHONE NUMBER: 303-350-5719

PROPOSED LOCATION:

NWNE 16 110S 240E

SURFACE: 0836 FNL 2160 FEL

BOTTOM: 0654 FNL 0661 FEL

COUNTY: Uintah

LATITUDE: 39.86687 LONGITUDE: -109.2336

UTM SURF EASTINGS: 651078 NORTHINGS: 4414264

FIELD NAME: UNDESIGNATED ( 2 )

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering	DKD	12/1/06
Geology		
Surface		

LEASE TYPE: 3 - State

LEASE NUMBER: ML-47080

SURFACE OWNER: 3 - State

PROPOSED FORMATION: MVRD

COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

☒ Plat  
☒ Bond: Fed[] Ind[] Sta[] Fee[]  
(No. RUB0008031 )  
☒ Potash (Y/N)  
☒ Oil Shale 190-5 (B) or 190-3 or 190-13  
☒ Water Permit  
(No. 49-2215 )  
☒ RDCC Review (Y/N)  
(Date: \_\_\_\_\_ )  
☒ Fee Surf Agreement (Y/N)  
☒ Intent to Commingle (Y/N)

LOCATION AND SITING:

\_\_\_\_ R649-2-3.  
Unit: \_\_\_\_\_  
\_\_\_\_ R649-3-2. General  
Siting: 460 From Qtr/Qtr & 920' Between Wells  
\_\_\_\_ R649-3-3. Exception  
\_\_\_\_ Drilling Unit  
Board Cause No: \_\_\_\_\_  
Eff Date: \_\_\_\_\_  
Siting: \_\_\_\_\_  
☒ R649-3-11. Directional Drill

COMMENTS:

Needs Permit (11-21-06)

STIPULATIONS:

1 - Spacing Strip  
2 - STATEMENT OF BASIS  
3 - Surface Csg Cont Strip



# HOUSE FIELD

T11S R24E

ASPHALT WASH  
11-24-34-9

ASPHALT WASH  
11-24-44-9

ASPHALT WASH  
11-24-24-9

ASPHALT WASH  
11-24-11-16

ASPHALT WASH  
11-24-21-16

ASPHALT WASH 11-24-41-16  
RAINBOW 11-24-31-16  
STATE N 31-16

BHL  
11-24-11-16

ASPHALT WASH  
11-24-12-16

ASPHALT WASH  
11-24-32-16

ASPHALT WASH  
11-24-42-16

16

ASPHALT WASH  
11-24-13-16

ASPHALT WASH  
11-24-23-16

ASPHALT WASH  
11-24-24-16

ASPHALT WASH  
11-24-34-16

FED N 31-21

OPERATOR: ENDURING RES LLC (N2750)

SEC: 16 T.11S R. 24E

FIELD: UNDESIGNATED (002)

COUNTY: UINTAH

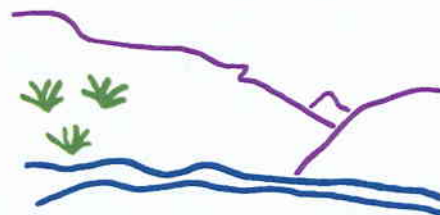
SPACING: R649-3-11/ DIRECTIONAL DRILLING

**Field Status**  
 ABANDONED  
 ACTIVE  
 COMBINED  
 INACTIVE  
 PROPOSED  
 STORAGE  
 TERMINATED

**Unit Status**  
 EXPLORATORY  
 GAS STORAGE  
 NF PP OIL  
 NF SECONDARY  
 PENDING  
 PI OIL  
 PP GAS  
 PP GEOTHERML  
 PP OIL  
 SECONDARY  
 TERMINATED

## Wells Status

GAS INJECTION  
 GAS STORAGE  
 LOCATION ABANDONED  
 NEW LOCATION  
 PLUGGED & ABANDONED  
 PRODUCING GAS  
 PRODUCING OIL  
 SHUT-IN GAS  
 SHUT-IN OIL  
 TEMP. ABANDONED  
 TEST WELL  
 WATER INJECTION  
 WATER SUPPLY  
 WATER DISPOSAL  
 DRILLING



Utah Oil Gas and Mining



PREPARED BY: DIANA MASON  
DATE: 30-OCTOBER-2006

# Application for Permit to Drill

## Statement of Basis

11/27/2006

Utah Division of Oil, Gas and Mining

Page 1

<b>APD No</b>	<b>API WellNo</b>	<b>Status</b>	<b>Well Type</b>	<b>Surf Ownr</b>	<b>CBM</b>
151	43-047-38768-00-00	.	GW	S	No
<b>Operator</b>	ENDURING RESOURCES, LLC		<b>Surface Owner-APD</b>		
<b>Well Name</b>	ASPHALT WASH 11-24-41-16		<b>Unit</b>		
<b>Field</b>	UNDESIGNATED		<b>Type of Work</b>		
<b>Location</b>	NWNE 16 11S 24E S 0 F L 0 F L GPS Coord (UTM) 651078E 4414264N				

### Geologic Statement of Basis

Enduring proposes to set 2,016 feet of surface casing cemented to the surface. The base of the moderately saline water is estimated at 4,400 feet. A search of Division of Water Rights records shows 1 water well within a 10,000 foot radius of the proposed location. The well is owned by the BLM with the use listed as wildlife and stock watering. No depth is listed. The surface formation at this location is the Uinta/Green River Formation transition. The Uinta Formation is made up of discontinuous sands interbedded with shales and are not expected to produce prolific aquifers. The Green River Formation is made up of interbedded limestones, shales and sandstones. Fresh water aquifers can be found in the Green River Formation and should be protected. The proposed surface casing should adequately protect any potentially useable aquifers. Production casing cement should be brought up above the base of the moderately saline ground water.

Brad Hill  
APD Evaluator

11/27/2006  
Date / Time

### Surface Statement of Basis

The proposed Asphaqlt Wash 11-24-41-16 is a directional well to be drilled from an existing pad of a producing oil and gas well (Asphalt Wash 11-24-31-16). No changes will be made to the size of the location.

Prior to drilling the proposed well, the reserve pit liner must be checked to determine its condition. If necessary the pit must be relined.

Floyd Bartlett  
Onsite Evaluator

11/21/2006  
Date / Time

### Conditions of Approval / Application for Permit to Drill

<b>Category</b>	<b>Condition</b>
Pits	A synthetic liner with a minimum thickness of 16 mils with a felt subliner shall be maintained in the reserve pit. The existing liner appears to be in good condition. Prior to drilling the well, its condition should be re-evaluated. If necessary it must be replaced.

# **ON-SITE PREDRILL EVALUATION**

## **Utah Division of Oil, Gas and Mining**

**Operator** ENDURING RESOURCES, LLC  
**Well Name** ASPHALT WASH 11-24-41-16  
**API Number** 43-047-38768-0 **APD No** 151 **Field/Unit** UNDESIGNATED  
**Location:** 1/4,1/4 NWNE **Sec** 16 **Tw** 11S **Rng** 24E 0 FL 0 FL  
**GPS Coord (UTM)** **Surface Owner**

### **Participants**

Floyd Bartlett (DOGM), Doug Hammond (Enduring Resources), Larry Rowell (Ponderosa Construction), Jim Davis (SITLA), Ben Williams (UDWR).

### **Regional/Local Setting & Topography**

On existing pad. No enlargements needed.

### **Surface Use Plan**

#### **Current Surface Use**

Existing Well Pad

Deer Winter Range

#### **New Road**

<b>Miles</b>	<b>Well Pad</b>		<b>Src Const Material</b>	<b>Surface Formation</b>
0	<b>Width</b>	<b>Length</b>		

#### **Ancillary Facilities**

### **Waste Management Plan Adequate? Y**

### **Environmental Parameters**

**Affected Floodplains and/or Wetland** N

**Flora / Fauna**

**Soil Type and Characteristics**

**Erosion Issues** N

**Sedimentation Issues** N

**Site Stability Issues** N

**Drainage Diversion Required** N

**Berm Required?** N

**Erosion Sedimentation Control Required?** N

**Paleo Survey Run?** Y **Paleo Potential Observed?** **Cultural Survey Run?** Y **Cultural Resources?**

**Reserve Pit**

**Site-Specific Factors**

**Site Ranking**

Distance to Groundwater (feet)  
Distance to Surface Water (feet)  
Dist. Nearest Municipal Well (ft)  
Distance to Other Wells (feet)  
Native Soil Type  
Fluid Type  
Drill Cuttings  
Annual Precipitation (inches)  
Affected Populations  
Presence Nearby Utility Conduits

**Final Score**

**Sensitivity Level**

**Characteristics / Requirements**

Existing pit which is full of water. Liner appears to be ok at this time.

**Closed Loop Mud Required? N   Liner Required? Y   Liner Thickness 16   Pit Underlayment Required? Y**

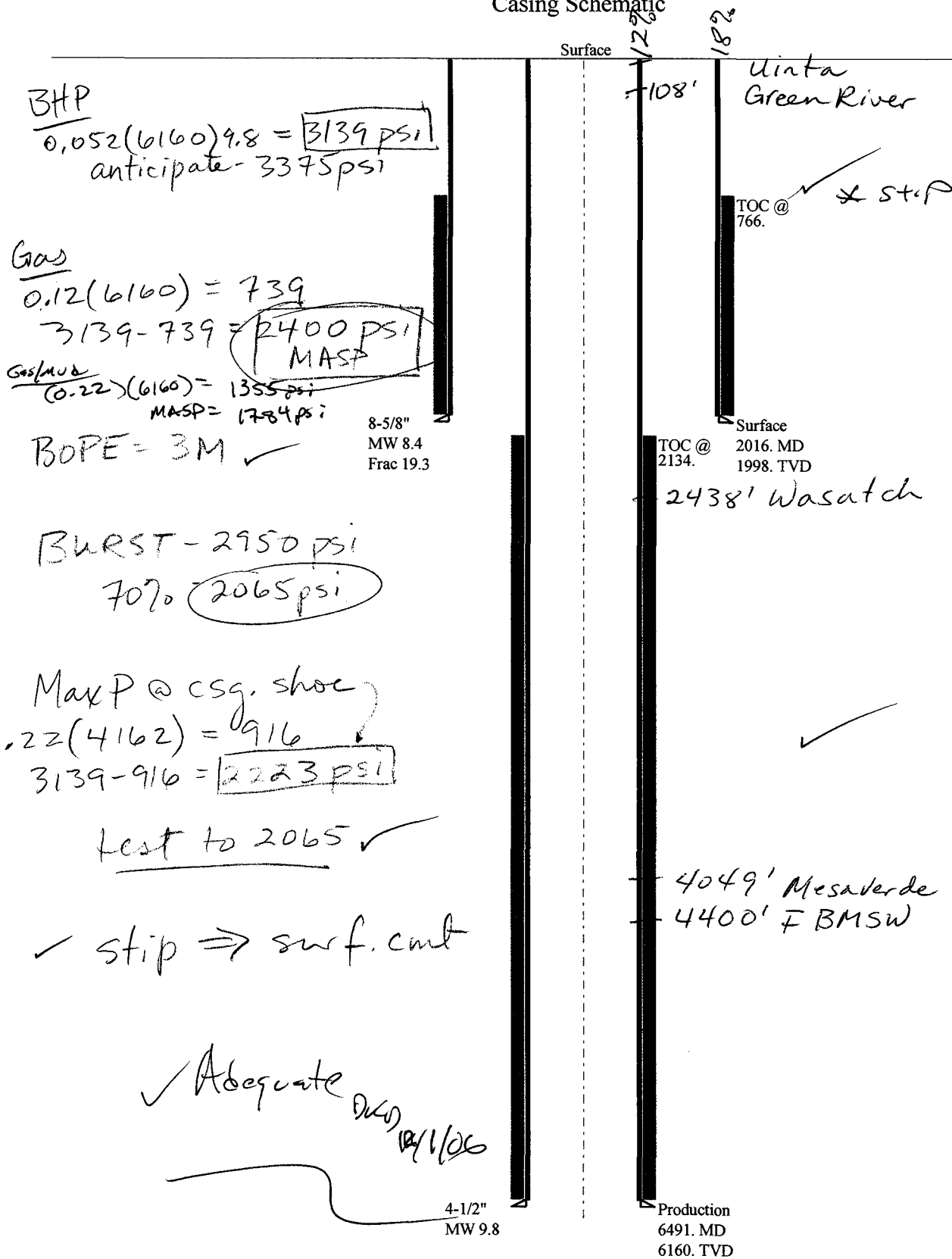
**Other Observations / Comments**

The UTM's of the location were not taken as a pump jack sets over the proposed center spot.

Floyd Bartlett  
**Evaluator**

11/21/2006  
**Date / Time**

Casing Schematic



Well name:

**2006-11 Enduring Asphalt Wash 11-24-41-16**Operator: **Enduring Resources, LLC**String type: **Surface**

Project ID:

43-047-38768

Location: **Uintah County, Utah****Design parameters:****Collapse**Mud weight: 8.400 ppg  
Design is based on evacuated pipe.**Minimum design factors:****Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**H2S considered? No  
Surface temperature: 75 °F  
Bottom hole temperature: 103 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 1,000 ft

Cement top: 766 ft

**Burst**Max anticipated surface  
pressure: 1,774 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 2,014 psi

No backup mud specified.

**Tension:**8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.60 (B)

Tension is based on buoyed weight.

Neutral point: 1,760 ft

**Directional Info - Build & Drop**Kick-off point 2473 ft  
Departure at shoe: 220 ft  
Maximum dogleg: 2 °/100ft  
Inclination at shoe: 10 °**Re subsequent strings:**Next setting depth: 6,160 ft  
Next mud weight: 9.800 ppg  
Next setting BHP: 3,136 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 2,016 ft  
Injection pressure: 2,016 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2016	8.625	24.00	J-55	ST&C	1998	2016	7.972	10378
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	872	1370	1.571 ✓	2014	2950	1.46 ✓	41.9	244	5.82 J ✓

Prepared Helen Sadik-Macdonald  
by: Div of Oil, Gas & MineralsPhone: 801/538-5357  
FAX: 801/359-3940Date: November 30, 2006  
Salt Lake City, Utah**Remarks:**

Collapse is based on a vertical depth of 1998 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop &amp; Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

*Engineering responsibility for use of this design will be that of the purchaser.*

Well name: **2006-11 Enduring Asphalt Wash 11-24-41-16**  
 Operator: **Enduring Resources, LLC**  
 String type: **Production**  
 Location: **Uintah County, Utah**  
 Project ID:  
**43-047-38768**

**Design parameters:**

**Collapse**

Mud weight: 9.800 ppg  
 Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
 Surface temperature: 75 °F  
 Bottom hole temperature: 161 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 1,000 ft

Cement top: 2,134 ft

**Burst**

Max anticipated surface pressure: 1,781 psi  
 Internal gradient: 0.220 psi/ft  
 Calculated BHP 3,136 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
 8 Round LTC: 1.80 (J)  
 Buttress: 1.60 (J)  
 Premium: 1.50 (J)  
 Body yield: 1.60 (B)

**Directional Info - Build & Drop**

Kick-off point 2473 ft  
 Departure at shoe: 1509 ft  
 Maximum dogleg: 5 °/100ft  
 Inclination at shoe: 0 °

Tension is based on buoyed weight.

Neutral point: 5,589 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	6491	4.5	11.60	N-80	LT&C	6160	6491	3.875	26733
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	3136	6350	2.025 ✓	3136	7780	2.48 ✓	61	223	3.66 J ✓

Prepared by: Helen Sadik-Macdonald  
 Div of Oil, Gas & Minerals

Phone: 801/538-5357  
 FAX: 801/359-3940

Date: November 30, 2006  
 Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 6160 ft, a mud weight of 9.8 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

*Engineering responsibility for use of this design will be that of the purchaser.*

**From:** Ed Bonner  
**To:** Mason, Diana  
**Date:** 5/11/2007 4:36 PM  
**Subject:** Well Clearance

**CC:** Davis, Jim; Garrison, LaVonne; Hill, Brad; Hunt, Gil

The following wells have been given cultural resources clearance by the Trust Lands Cultural Resources Group:

EnCana Oil & Gas (USA) Inc  
Middle Mesa State 36-24-29-24 (API 43 037 31856)

Enduring Resources, LLC  
Archy Bench 10-22-34-36 (API 43 047 38605)  
Asphalt Wash 11-24-41-16 (API 43 047 38768)

EOG Resources, Inc  
East Chapita 56-16 (API 43 047 39203)

Kerr McGee Oil & Gas Onshore LP  
NBU 1022-24I (API 43 047 39031)

Tidewater Oil & Gas Company, LLC  
Cactus Rose 36-43-2217 (API 43 019 31535)

If you have any questions regarding this matter please give me a call.





**State of Utah**

**Department of  
Natural Resources**

MICHAEL R. STYLER  
*Executive Director*

**Division of  
Oil, Gas & Mining**

JOHN R. BAZA  
*Division Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

May 14, 2007

Enduring Resources, LLC  
475 17th St., Ste. 1500  
Denver, CO 80202

Re: Asphalt Wash 11-24-41-16 Well, 836' FNL, 2160' FEL, NW NE, Sec. 16,  
T. 11 South, R. 24 East, Bottom Location 654' FNL, 661' FEL, NE NE,  
Sec. 16, T. 11 South, R. 24 East, Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-38768.

Sincerely,

Gil Hunt  
Associate Director

pab  
Enclosures

cc: Uintah County Assessor  
SITLA

Operator: Enduring Resources, LLC  
Well Name & Number Asphalt Wash 11-24-41-16  
API Number: 43-047-38768  
Lease: ML-47080

Location: NW NE Sec. 16 T. 11 South R. 24 East  
Bottom Location: NE NE Sec. 16 T. 11 South R. 24 East

### Conditions of Approval

#### 1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### 2. Notification Requirements

The operator is required to notify the Division of Oil, Gas and Mining of the following action during drilling of this well:

- 24 hours prior to cementing or testing casing – contact Dan Jarvis
- 24 hours prior to testing blowout prevention equipment – contact Dan Jarvis
- 24 hours prior to spudding the well – contact Carol Daniels
- Within 24 hours of any emergency changes made to the approved drilling program – contact Dustin Doucet
- Prior to commencing operations to plug and abandon the well – contact Dan Jarvis

The operator is required to get approval from the Division of Oil, Gas and Mining before performing any of the following actions during the drilling of this well:

- Plugging and abandonment or significant plug back of this well – contact Dustin Doucet
- Any changes to the approved drilling plan – contact Dustin Doucet

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at: (801) 538-5338 office  
(801) 942-0873 home
- Carol Daniels at: (801) 538-5284 office
- Dustin Doucet at: (801) 538-5281 office  
(801) 733-0983 home

#### 3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.
5. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.
6. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)
7. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.
8. Surface casing shall be cemented to surface.

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47080
2. NAME OF OPERATOR: Enduring Resources, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a
3. ADDRESS OF OPERATOR: 475 17th Street, Suite 1500 CITY Denver STATE CO ZIP 80202		7. UNIT or CA AGREEMENT NAME: n/a
4. LOCATION OF WELL FOOTAGES AT SURFACE: 836' FNL - 2160' FEL BHL= NENE COUNTY: Uintah QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNE 16 11S 24E S STATE: UTAH		8. WELL NAME and NUMBER: Asphalt Wash 11-24-41-16
PHONE NUMBER: (303) 350-5114		9. API NUMBER: 4304738768
		10. FIELD AND POOL, OR WILDCAT: Undesignated

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____  <input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION (START/RESUME) <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	<input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUT-OFF <input checked="" type="checkbox"/> OTHER: Request for APD Extension

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Enduring Resources, LLC respectfully request an extension to the expiration date of this Application for Permit to Drill ....

FROM: 5/14/2008  
TO: 5/14/2009

Approved by the  
Utah Division of  
Oil, Gas and Mining

COPY SENT TO OPERATOR

Date: 5-21-2008

Initials: KS

Date: 05-20-08  
By: [Signature]

NAME (PLEASE PRINT) Alvin (Al) Arlian	TITLE Landman - Regulatory Specialist
SIGNATURE [Signature]	DATE 5/12/2008

(This space for State use only)

RECEIVED  
MAY 19 2008  
DIV. OF OIL, GAS & MINING



**Application for Permit to Drill  
Request for Permit Extension  
Validation**

(this form should accompany the Sundry Notice requesting permit extension)

**API:** 4304738768  
**Well Name:** Asphalt Wash 11-24-41-16  
**Location:** 836' FNL - 2160' FEL, NWNE, Sec 16, T11S-R24E  
**Company Permit Issued to:** Enduring Resources, LLC  
**Date Original Permit Issued:** 5/14/2007

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.

If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes ☐ No ☐

Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes ☐ No ☒


Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes ☐ No ☒

Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes ☐ No ☒

Has the approved source of water for drilling changed? Yes ☐ No ☒

Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes ☐ No ☒

Is bonding still in place, which covers this proposed well? Yes ☒ No ☐

  
Signature

5/12/2008

Date

Title: Landman - Regulatory Specialist

Representing: Enduring Resources, LLC

RECEIVED

MAY 19 2008

DIV. OF OIL, GAS & MINING

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

**CONFIDENTIAL**

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL

OIL WELL ☐

GAS WELL ☒

OTHER \_\_\_\_\_

2. NAME OF OPERATOR:

Enduring Resources, LLC

3. ADDRESS OF OPERATOR:

475 17th Street, Suite 1500 CITY Denver

STATE CO ZIP 80202

PHONE NUMBER:

(303) 350-5114

5. LEASE DESIGNATION AND SERIAL NUMBER:

ML-47080

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

n/a

7. UNIT OR CA AGREEMENT NAME:

n/a

8. WELL NAME and NUMBER:

Asphalt Wash 11-24-41-16

9. API NUMBER:

4304738768

10. FIELD AND POOL, OR WILDCAT:

Undesignated

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 836' FNL - 2160' FEL

BHL= NENE

COUNTY: Uintah

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNE 16 11S 24E S

STATE:

UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION



NOTICE OF INTENT  
(Submit in Duplicate)

Approximate date work will start:



SUBSEQUENT REPORT  
(Submit Original Form Only)

Date of work completion:



ACIDIZE



ALTER CASING



CASING REPAIR



CHANGE TO PREVIOUS PLANS



CHANGE TUBING



CHANGE WELL NAME



CHANGE WELL STATUS



COMMINGLE PRODUCING FORMATIONS



CONVERT WELL TYPE



DEEPEN



FRACTURE TREAT



NEW CONSTRUCTION



OPERATOR CHANGE



PLUG AND ABANDON



PLUG BACK



PRODUCTION (START/RESUME)



RECLAMATION OF WELL SITE



RECOMPLETE - DIFFERENT FORMATION



REPERFORATE CURRENT FORMATION



SIDETRACK TO REPAIR WELL



TEMPORARILY ABANDON



TUBING REPAIR



VENT OR FLARE



WATER DISPOSAL



WATER SHUT-OFF



OTHER: Request for APD  
Extension

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Enduring Resources, LLC respectfully requests a one year extension of the expiration date of this Application for Permit to Drill.

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: 05-18-09  
By: [Signature]

COPY SENT TO OPERATOR

Date: 5.19.2009

Initials: KS

NAME (PLEASE PRINT) Alvin R. (Al) Arlian

TITLE Landman - Regulatory Specialist

SIGNATURE

DATE 6/1/2009 5-20-2009

(This space for State use only)

RECEIVED

MAY 18 2009

DIV. OF OIL, GAS & MINING

**Application for Permit to Drill  
Request for Permit Extension  
Validation**

(this form should accompany the Sundry Notice requesting permit extension)

**API:** 4304738768  
**Well Name:** Asphalt Wash 11-24-41-16  
**Location:** 836' FNL - 2160' FEL, NWNE, Sec 16, T11S-R24E  
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**Date Original Permit Issued:** 5/14/2007

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Has the approved source of water for drilling changed? Yes ☐ No ☒

Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes ☐ No ☒

Is bonding still in place, which covers this proposed well? Yes ☒ No ☐

  
Signature

~~6/1/2009~~ 5-20-2009  
Date

**Title:** Administrative Assistant

**Representing:** Enduring Resources, LLC

**RECEIVED**  
**MAY 18 2009**

DIV. OF OIL, GAS & MINING



GARY R. HERBERT  
Governor

GREGORY S. BELL  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

May 25, 2010

Al Arlian  
Enduring Resources, LLC  
475 17<sup>TH</sup> Street Ste 1500  
Denver, CO 80202

Re: APD Rescinded – Asphalt Wash 11-24-41-16, Sec. 16 T.11S, R. 24E  
Uintah County, Utah API No. 43-047-38768

Dear Mr. Arlian:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on May 14, 2007. On May 20, 2008 and May 18, 2009 the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective May 25, 2010.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason  
Environmental Scientist

cc: Well File  
SITLA, Ed Bonner